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TM 10-206

WAR DEPARTMENT TECHNICAL MANUAL

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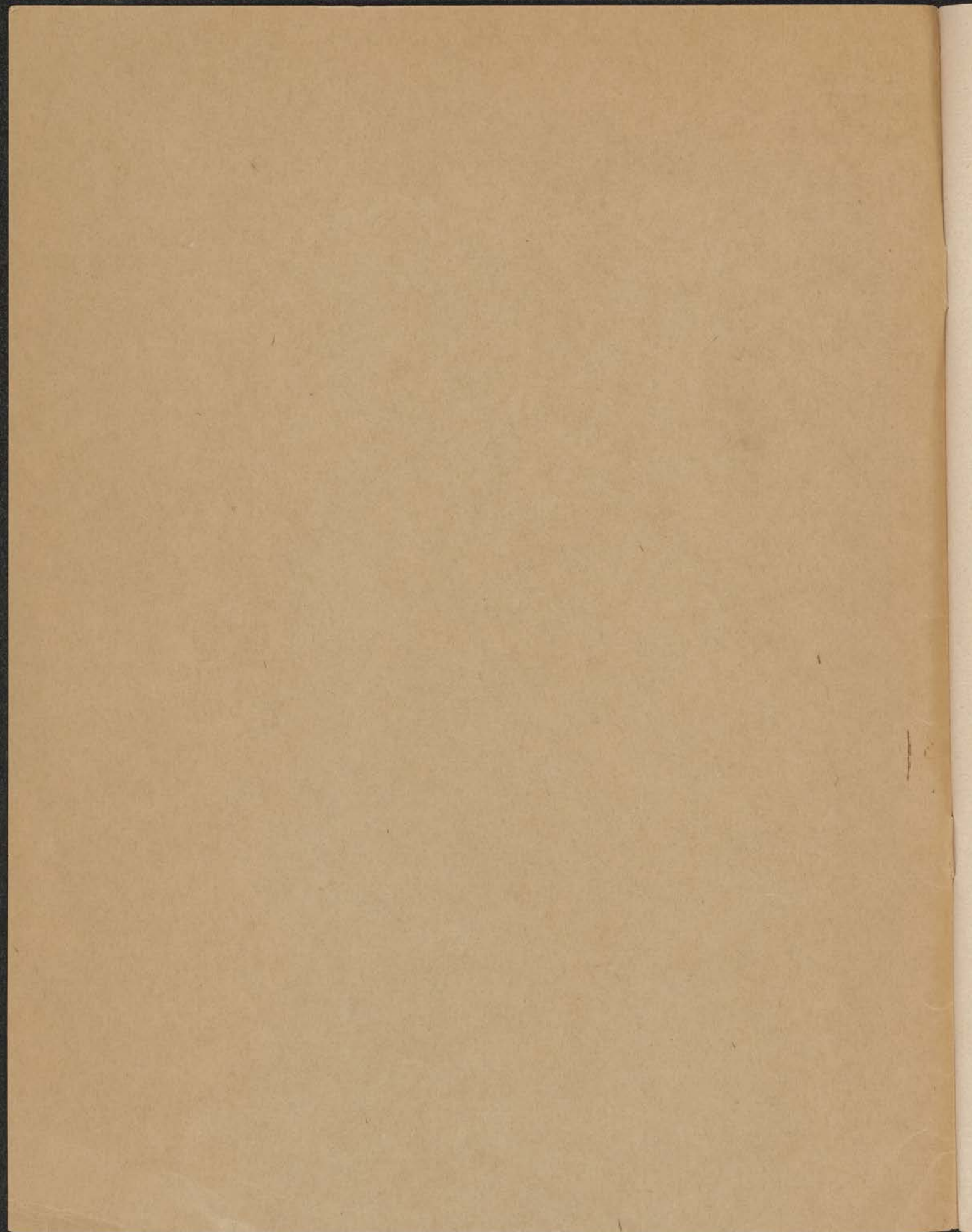
KITCHEN CARS

SUPPLIES, EQUIPMENT,
AND RATIONS

WAR DEPARTMENT •

JUNE 1945

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TECHNICAL MANUAL
KITCHEN CARS
SUPPLIES, EQUIPMENT, AND RATIONS

CHANGES
No. 1 }

WAR DEPARTMENT,
Washington 25, D. C., 18 July 1945

TM 10-206, 16 June 1945, is changed as follows:

The illustrations for figures 1 and 5 are transposed.

The line drawing on page 10 should appear on page 6 as Figure 1, Construction of "A" Box.

The line drawing on page 6 should appear on page 10 as Figure 5, Construction of "D" Box for Standard 5-gallon Drum.

[AG 300.7 (14 Jul 45)]

BY ORDER OF THE SECRETARY OF WAR:

OFFICIAL:

EDWARD F. WITSELL
Major General
Acting The Adjutant General

G. C. MARSHALL
Chief of Staff

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Refer to FM 21-6 for explanation of distribution formula.

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TECHNICAL MANUAL

KITCHEN CARS
SUPPLIES, EQUIPMENT, AND RATIONSCHANGES
No. 2 }

WAR DEPARTMENT

WASHINGTON 25, D. C., 20 January 1947

TM 10-206, 16 June 1945, is changed as follows:

2. References

All persons responsible * * * the following publications:

- a. AR 30-2215, Meal Tickets.
- b. AR 55-130, or TM 55-530 (when published).
- c. AR 55-135, or TM 55-530 (when published).

* * * * *

3. Types of Cars (Superseded)

Messing facilities for troop trains are provided by the types of kitchen cars listed below only. Stripped railroad dining cars will not be used as kitchen cars.

* * * * *

4. Use of Messing Facilities (Superseded)

a. (1) During rail movements, troops are fed by one of two methods: either they are subsisted by means of meal tickets as prescribed by AR 30-2215, or they are fed by means of the messing facilities described in paragraph 3 above. In general, consideration as to which method is to be used is governed by the principles of efficiency and economy and is determined by a combination of three factors: number of troops, duration of journey, and nature of mission. Paragraph *b* below lists the conditions under which messing facilities must be used; *c* and *d* below list the conditions under which either the use of meal tickets or messing facilities may be used at the discretion of the station commander.

(2) The term "cadre" as used in this paragraph refers to a small number of troops, entitled to sleeping car accommodations under the provisions of TM 55-525, either traveling together to a specified destination for the purpose of accompanying or conveying a large number of troops on the return trip, or traveling together on the return trip after having accompanied or conveyed a large number of troops on the outgoing trip.

b. Under the conditions listed below, meal tickets will not be issued to troops; troops will be subsisted either from troop kitchen cars or kitchen baggage cars, depending upon which is available, as determined by the Chief of Transportation: 100 or more persons are scheduled for a journey of 24 hours or more duration.

c. Under the conditions listed below, troops may be subsisted by meal tickets or they may be fed by either troop kitchen cars or kitchen baggage cars, depending upon which type of car is available as determined by the office of the Chief of Transportation:

(1) Special mixed freight-passenger troop train movements of less than 100 persons are scheduled for journeys of 24 hours or more duration.

(2) A cadre of 27 or more men, as defined in a(2) above, is scheduled for a journey of 24 hours or longer.

d. Under the conditions listed below, troops may be subsisted either by means of meal tickets or, when such cars are available as determined by the office of the Chief of Transportation, by troop kitchen cars only (*not* kitchen baggage cars):

(1) One hundred or more persons are scheduled for a journey of less than 24 hours.

(2) Forty to ninety-nine persons are scheduled for movement regardless of the length of the journey (except a cadre under the conditions listed in a(2) above).

(3) A cadre of 27 or more men, as defined in a(2) above, is scheduled for a journey of less than 24 hours duration.

5. Care of Equipment

a. It is necessary * * * returned for reuse. Shipping containers to be used for the return of equipment will be supplied at point of origin. (See par. 6.) Paragraph 6 of this manual prescribes responsibility for the installation of kitchen equipment at point of origin and for the dismantling and prompt return of such equipment at destination.

* * * * *

6. Responsibilities

The following procedures * * * trains carrying casualties:

a. STATION COMMANDERS. (1) The station commander at the point of origin will be responsible that:

* * * * *

(d) Bill of lading * * * prior to departure. Such shipment may be made either by freight, or by express (subject to the provisions of Section II, War Department Commercial Traffic Bulletin No. 29, 1945), or when it can be shipped in connection with troops returning to the point of origin, it may be shipped as military impedimenta with such troops under the rules governing such shipments. The method of shipment to be used will be determined by the military needs in each case. Whenever express service is to be utilized, citation of this manual will be made on the bill of lading.

(2) The station commander at destination will be responsible that:

* * * * *

(b) Shipment of kitchen * * * the train quartermaster.

* * * * *

(d) (Added.) It will be the responsibility of the commander of the post, camp, or station at destination to ensure that, prior to its shipment back to the point of origin, all equipment is in a clean, sanitary and serviceable condition.

* * * * *

c. JOINT RESPONSIBILITY UNDER CERTAIN CONDITIONS. (Added.) (1) In certain cases, the commanding officer of the post that is the point of departure for troops authorized (under the provisions of AR 30-2215) to be subsisted en route in a kitchen baggage car, will not have available the ranges and other kitchen equipment necessary for equipping a kitchen baggage car. Under such conditions, the commanding officer of the post from which the troops are to depart will request the commanding officer of the post to which the troops are to proceed to supply the necessary equipment, informing him well in advance concerning the amount and type required and the date and time it is needed. If the commanding officer of the post to which the troops are to proceed does not have the necessary equipment avail-

able, he will advise the commander of the army or similar command that controls his installation for purposes of supply and/or administration. The commander of the army or similar command will, in turn, direct another post where such equipment is available to ship the necessary equipment directly to the post which is the point of departure for the troops authorized the kitchen baggage car.

(2) Since this kitchen equipment is not to be used en route for the preparation of food it may be crated and shipped either by freight, by express (subject to the provisions of Section II, War Department Commercial Traffic Bulletin No. 29, 1945) or, when it can be shipped with troops traveling to the same point, it may be shipped as military impedimenta with such troops under the rules governing such shipments. The commanding officer making shipment will determine which of the foregoing methods will meet the military needs, and will advise his station transportation officer accordingly. Whenever express shipment is specified, citation of this manual will be made both in the directions for shipment and on the bill of lading covering the shipment.

(3) Upon receipt of the equipment, the commanding officer of the post that is point of departure for the troop movement will acknowledge its receipt on a shipping ticket or a bill of lading and will install the equipment in the kitchen baggage car. The train quartermaster will then assume responsibility for ensuring that the equipment is maintained in good condition for the duration of the journey.

(4) Upon arrival at destination, the train quartermaster will turn the equipment over to the commanding officer of the post. If another post has furnished the equipment by direction of the commander of an army or similar command as prescribed in (1) above, shipment of kitchen equipment to the station of its origin will be accomplished by the transportation officer of the post at which the troops have arrived.

7. Sanitation and Reports (Superseded)

See TM 55-530 (When published).

9. Quantities

* * * * *

c. The following equipment is contained in each unit:

* * * * *

(5) *Unit X.* (Added.)

1 Extinguisher, fire, carbon tetrachloride,
hand type, 1-gallon.

1 Extinguisher, fire, foam type, 2½-gallon.

* * * * *

Figure 6. Unit D (with three drums).

18. Gasoline

* * * * *

d. On the outside of the boxcar in which the reserve gasoline is carried, attach **on each side door and on each end** a placard bearing the word, "DANGEROUS," in large letters. Below the placard on each side door, place a second placard, 8 inches by 10 inches, reading "EXTRA

GASOLINE FOR COOKING PURPOSES." On the same card * * * in red letters.

* * * * *

h. The War Department * * * of New York.

(1) All gasoline in fire units and in containers must be removed from the car before the train enters the tunnels (entering or leaving the city) and replaced after the train has passed through.

* * * * *

Change footnote at bottom of page 22 to read:

*Note. In paragraphs 24 and 25 measurements given for replacement of cleats and dividers are figured from the *center* of the piece. "Right end" and "left end" refer to the ends as seen from a position facing the open box.

* * * * *

31. Recapitulation Issue Chart. Rescinded.

32. Menu and Issue Chart for Unforeseen Delays en Route (Nonperishable) (Superseded)

<i>Breakfast</i>	<i>Dinner</i>	<i>Supper</i>
Canned fruit ¹	Meat and vegetable hash	Luncheon meat
Pork sausages	Tomatoes	Green peas
Bread or crackers	Bread or crackers	Pickles
Jam or marmalade	Jam or marmalade	Bread or crackers
Coffee	Canned fruit ¹	Jam or marmalade
	Coffee	Canned fruit ¹
		Cocoa

¹ See list of canned fruits, paragraph 35.

Ingredients	Unit	Number	Ingredients	Unit	Number	Ingredients	Unit	Number
Canned fruit.....	#10 can	5	Meat and vegetable hash.....	#10 can	6	Luncheon meat.....	6 lb can	6
Pork sausages.....	2-lb can	20	Tomatoes.....	#10 can	3	Peas, green.....	#10 can	3
Bread.....	lb	12	Bread.....	lb	12	Pickles.....	gal	1
(or crackers.....)	lb	10	(or crackers.....)	lb	10	Bread.....	lb	12
Jam or marmalade.....	2-lb jar	3	Jam or marmalade.....	2-lb jar	3	(or crackers.....)	lb	10
Coffee, R and G.....	lb	3	Canned fruit.....	#10 can	5	Jam or marmalade.....	2-lb jar	3
Milk, evaporated.....	#1 can	4	Coffee, R and G.....	lb	3	Canned fruit.....	#10 can	5
Sugar, granulated.....	lb	3	Milk, evaporated.....	#1 can	4	Cocoa.....	lb	3
			Sugar, granulated.....	lb	3	Milk, evaporated.....	#1 can	20
						Sugar, granulated.....	lb	5

SUPPLIES FOR PAPER SERVICE

Plates, paper, 9".....	ea	110	Plates, paper, 9".....	ea	110	Plates, paper, 9".....	ea	110
Plates, dessert, paper, 5".....	ea	110	Plates, dessert, paper, 5".....	ea	110	Plates, dessert, paper, 5".....	ea	110
Cups, paper, 8-oz. ²	ea	110	Cups, paper, 8-oz. ²	ea	110	Cups, paper, 8-oz. ²	ea	110
Forks, paper.....	ea	110	Forks, paper.....	ea	110	Forks, paper.....	ea	110
Spoons, paper.....	ea	110	Spoons, paper.....	ea	110	Spoons, paper.....	ea	110

² Hot liquid type.

Ingredients—100 Men

Issue Chart for Nonperishable Menu

Nonperishable items	Unit	Breakfast	Dinner	Supper	Total
Luncheon meat.....	6-lb can			6	6
Pork sausages.....	2-lb can	20			20
Meat and vegetable hash.....	#10 can		6		6
Milk, evaporated.....	#1 (14½-oz can).....	4	4	20	28
Sugar, granulated.....	lb	3	3	5	11
Jam or marmalade.....	2-lb jar	3	3	3	9
Bread.....	lb	12	12	12	36
(or crackers).....	(lb)	(10)	(10)	(10)	(30)
Peas, green.....	#10 can			3	3
Tomatoes.....	#10 can		3		3
Canned fruit ¹	#10 can	5	5	5	15
Coffee, R and G.....	lb	3	3		6
Cocoa.....	lb			3	3
Pickles.....	gal			1	1

SUPPLIES FOR PAPER SERVICE

Plates, paper, 9".....	ea	110	110	110	330
Plates, dessert, paper, 5".....	ea	110	110	110	330
Cups, paper, 8-oz. ²	ea	110	110	110	330
Forks, paper.....	ea	110	110	110	330
Spoons, paper.....	ea	110	110	110	330

¹ See list of canned fruits, paragraph 35.

² Hot liquid type.

33. Menus and Issue Charts for Normal Scheduled Journey (Superseded)

Menu No. 1

Breakfast	Dinner	Supper
Oranges	Baked ham	Baked beans
Bacon	Mustard	Frankfurters
Scrambled eggs	Potatoes	Catsup
Bread	Boiled cabbage	Bread
Butter	Bread	Butter
Jam	Butter	Ice cream
Coffee	Chocolate pudding	Milk
	Coffee	

Ingredients	Unit	Number	Ingredients	Unit	Number	Ingredients	Unit	Number
Oranges	ea	100	Baked ham, S. C.	lb	55	Baked beans	#10 can	5
Bacon	lb	15	Mustard, prepared	gal	1/4	Frankfurters	lb	30
Scrambled eggs	doz	13	Potatoes	lb	35	Catsup	1 4 - o z bottle	5
Milk, evaporated	#1 can	3	Boiled cabbage:			Bread	lb	12
Bread	lb	12	Cabbage	lb	15	Butter	lb	2
Butter	lb	2	Bread	lb	12	Ice cream	gal	3 1/4
Jam	2-lb jar	3	Butter	lb	2	Milk, fresh	qt	25
Coffee, R and G	lb	3	Chocolate pudding:					
Milk, evaporated	#1 can	4	Powder, dessert, chocolate	10-lb can	1/2			
Sugar, granulated	lb	3	Milk, evaporated	#1 can	4			
			Coffee, R and G	lb	3			
			Milk, evaporated	#1 can	4			
			Sugar, granulated	lb	3			

Supplies for paper service

Plates, paper, 9"	ea	110	Plates, paper, 9"	ea	110	Plates, paper, 9"	ea	110
Cups, paper, 8-oz ¹	ea	110	Plates, dessert, paper, 5"	ea	110	Cups, paper, 8-oz ¹	ea	110
Forks, paper	ea	110	Cups, paper, 8-oz ¹	ea	110	Forks, paper	ea	110
Spoons, paper	ea	110	Forks, paper	ea	110	Spoons, paper	ea	110
			Spoons, paper	ea	110			

¹ Hot liquid type.

Ingredients—100 Men

Issue Chart for Menu No. 1

Perishable items	Unit	Breakfast	Dinner	Supper	Total
Bacon	lb	15			15
Frankfurters	lb			30	30
Ham	lb		55		55
Eggs	doz	13			13
Milk, fresh	qt			25	25
Ice cream	gal			3 1/4	3 1/4
Butter	lb	2	2	2	6
Cabbage	lb		15		15
Oranges	ea	100			100
Potatoes, white	lb		35		35

NONPERISHABLE ITEMS

Milk, evaporated	#1 (14 1/2-oz.) can	7	8		15
Sugar, granulated	lb	3	3		6
Jam	2-lb jar	3			3
Powder, dessert, chocolate	10-lb can		1/2		1/2
Bread	lb	12	12	12	36
Beans, baked	#10 can			5	5
Catsup	14-oz bottle			5	5
Coffee, R and G	lb	3	3		6
Mustard, prepared	gal		1/4		1/4

SUPPLIES FOR PAPER SERVICE

Plates, paper, 9"	ea	110	110	110	330
Plates, dessert, paper, 5"	ea		110		110
Cups, paper, 8-oz ¹	ea	110	110	110	330
Forks, paper	ea	110	110	110	330
Spoons, paper	ea	110	110	110	330

¹ Hot liquid type.

Menu No. 2

Breakfast

Apples
Bacon
Scrambled eggs
Bread
Butter
Jam
Coffee

Dinner

Beef stew
Beets
Pickles
Bread
Butter
Pineapple
Cocoa

Supper

Roast beef
Gravy
Potatoes
Green peas
Bread
Butter
Oranges
Coffee

Ingredients	Unit	Num-ber	Ingredients	Unit	Num-ber	Ingredients	Unit	Num-ber
Apples, eating-----	ea	100	Beef stew:			Roast beef and gravy:		
Bacon-----	lb	15	Beef, carcass ¹ -----	lb	35	Beef, carcass ¹ -----	lb	55
Scrambled eggs-----	doz	13	Potatoes, white-----	lb	20	Flour, wheat-----	lb	2
Milk, evaporated-----	#1 can	3	Carrots, fresh ² -----	lb	10	Potatoes, white-----	lb	35
Bread-----	lb	12	Onions, dry-----	lb	5	Peas, green-----	#10 can	3
Butter-----	lb	2	Flour, wheat-----	lb	2	Bread-----	lb	12
Jam-----	2-lb jar	3	Beets-----	#10 can	2	Butter-----	lb	2
Coffee, R and G-----	lb	3	Pickles-----	gal	1	Oranges-----	ea	100
Milk, evaporated-----	#1 can	4	Bread-----	lb	12	Coffee, R and G-----	lb	3
Sugar, granulated-----	lb	3	Butter-----	lb	2	Milk, evaporated-----	#1 can	4
			Pineapple-----	#10 can	5	Sugar, granulated-----	lb	3
			Cocoa ³ -----	lb	3			
			Milk, evaporated-----	#1 can	20			
			Sugar, granulated-----	lb	5			

¹ Reduce 30 percent if boneless beef.² If not available, substitute ten #2 cans of carrots (or two #10 cans).³ Fresh milk, if available, to be used in lieu of cocoa at rate of 25 quarts per 100 men.

SUPPLIES FOR PAPER SERVICE

Plates, paper, 9"-----	ea	110	Plates, paper, 9"-----	ea	110	Plates, paper, 9"-----	ea	110
Cups, paper, 8-oz. ⁴ -----	ea	110	Plates, dessert, paper, 5"-----	ea	110	Cups, paper, 8-oz. ⁴ -----	ea	110
Forks, paper-----	ea	110	Cups, paper, 8-oz. ⁴ -----	ea	110	Forks, paper-----	ea	110
Spoons, paper-----	ea	110	Forks, paper-----	ea	110	Spoons, paper-----	ea	110
			Spoons, paper-----	ea	110			

⁴ Hot liquid type.

Ingredients—100 Men

Issue Chart for Menu No. 2

Perishable items	Unit	Breakfast	Dinner	Supper	Total
Beef, carcass ¹	lb		35	55	90
Bacon	lb	15			15
Eggs	doz	13			13
Butter	lb	2	2	2	6
Carrots, fresh ²	lb		10		10
Oranges	ea			100	100
Potatoes, white	lb		20	35	55
Onions, dry	lb		5		5
Apples, eating	ea	100			100

¹ Reduce 30 percent if boneless beef.

² If not available, substitute ten #2 cans of carrots (or two #10 cans).

NONPERISHABLE ITEMS

Milk, evaporated	#1 (14½-oz.) can	7	20	4	31
Sugar, granulated	lb	3	5	3	11
Jam	2-lb jar	3			3
Bread	lb	12	12	12	36
Flour, wheat	lb		2	2	4
Peas, green	#10 can			3	3
Beets	#10 can		2		2
Pineapple (sliced if available)	#10 can		5		5
Coffee, R and G	lb	3		3	6
Cocoa ³	lb		3		3
Pickles	gal		1		1

³ Fresh milk, if available, to be used in lieu of cocoa at rate of 25 quarts per 100 men.

SUPPLIES FOR PAPER SERVICE

Plates, paper, 9"	ea	110	110	110	330
Plates, dessert, paper, 5"	ea		110		110
Cups, paper, 8-oz ⁴	ea	110	110	110	330
Forks, paper	ea	110	110	110	330
Spoons, paper	ea	110	110	110	330

⁴ Hot liquid type.

Menu No. 3

Breakfast

Oranges
Cheese omelet
Bread
Butter
Jam
Coffee

Dinner

Diced boiled beef
Noodles
Carrots
Bread
Butter
Peaches
Coffee

Supper

Roast pork
Gravy
Potatoes
Green beans
Bread
Butter
Fresh fruit
Cocoa

Ingredients	Unit	Num-ber	Ingredients	Unit	Num-ber	Ingredients	Unit	Num-ber
Oranges-----	ea	100	Diced boiled beef:			Roast pork and gravy:		
Cheese omelet:			Beef, carcass ¹ -----	lb	50	Pork, roasting-----	lb	55
Eggs-----	doz	13	Noodles-----	lb	10	Flour, wheat-----	lb	2
Cheese, A. C.-----	lb	3	Carrots ² -----	#2 can	15	Milk, evaporated-----	#1 can	2
Milk, evaporated-----	#1 can	3	Bread-----	lb	12	Potatoes, white-----	lb	35
Lard-----	lb	2	Butter-----	lb	2	Beans, green-----	#10 can	3
Bread-----	lb	12	Peaches-----	#10 can	5	Bread-----	lb	12
Butter-----	lb	2	Coffee, R and G-----	lb	3	Butter-----	lb	2
Jam-----	2-lb jar	3	Milk evaporated-----	#1 can	4	Fresh fruit ³ -----	ea	100
Coffee, R and G-----	lb	3	Sugar, granulated-----	lb	3	Cocoa ⁴ -----	lb	3
Milk, evaporated-----	#1 can	4				Milk, evaporated-----	#1 can	20
Sugar, granulated-----	lb	3				Sugar, granulated-----	lb	5

¹ Reduce 30 percent if boneless beef.² If not available, substitute three No. 10 cans of canned carrots or 20 pounds fresh carrots.³ See list of fresh fruits in information sheets.⁴ Fresh milk, if available, to be used in lieu of cocoa at rate of 25 quarts per 100 men.

SUPPLIES FOR PAPER SERVICE

Plates, paper, 9"-----	ea	110	Plates, paper, 9"-----	ea	110	Plates, paper, 9"-----	ea	110
Cups, paper, 8-oz ⁵ -----	ea	110	Plates, dessert, paper, 5"-----	ea	110	Cups, paper, 8-oz ⁵ -----	ea	110
Forks, paper-----	ea	110	Cups, paper, 8-oz ⁵ -----	ea	110	Forks, paper-----	ea	110
Spoons, paper-----	ea	110	Forks, paper-----	ea	110	Spoons, paper-----	ea	110
			Spoons, paper-----	ea	110			

⁵ Hot liquid type.

Ingredients—100 Men

Issue Chart for Menu No. 3

Perishable Items	Unit	Breakfast	Dinner	Supper	Total
Beef, carcass ¹	lb		50		50
Pork, roasting (ham, loin, butts, etc.)	lb			55	55
Eggs	doz	13			13
Cheese, A. C.	lb	3			3
Butter	lb	2	2	2	6
Lard	lb	2			2
Oranges	ea	100			100
Potatoes, white	lb			35	35
Fresh fruit ²	ea			100	100

NONPERISHABLE ITEMS

Milk, evaporated	#1 (14½-oz) can	7	4	22	33
Sugar, granulated	lb	3	3	5	11
Jam	2-lb. jar	3			3
Bread	lb	12	12	12	36
Flour, wheat	lb			2	2
Noodles	lb		10		10
Carrots ³	#2 can		15		15
Beans, green	#10 can			3	3
Peaches	#10 can		5		5
Coffee, R and G	lb	3	3		6
Cocoa ⁴	lb			3	3

¹ Reduce 30 percent if boneless beef.

² See list of fresh fruits in information sheets.

³ If not available, substitute three #10 cans of canned carrots or 20 pounds fresh carrots.

⁴ Fresh milk, if available, to be used in lieu of cocoa at rate of 25 quarts per 100 men.

SUPPLIES FOR PAPER SERVICE

Plates, paper, 9"	ea	110	110	110	330
Plates, dessert, paper, 5"	ea		110		110
Cups, paper, 8-oz ⁵	ea	110	110	110	330
Forks, paper	ea	110	110	110	330
Spoons, paper	ea	110	110	110	330

⁵ Hot liquid type.

Menu No. 4

Breakfast

Oranges
Pork sausages
Scrambled eggs
Bread
Butter
Jam
Coffee

Dinner

Baked fish
Boiled potatoes
Corn
Bread
Butter
Jam
Apples
Cocoa¹

Supper

Corned beef hash
Catsup
Green beans
Bread
Butter
Cookies
Coffee
Ice cream

Ingredients	Unit	Number	Ingredients	Unit	Number	Ingredients	Unit	Number
Oranges-----	ea	100	Baked fish:			Corned beef hash----	5½-lb	7
Pork sausages-----	2-lb can	15	Salmon-----	1-lb can	25	Catsup-----	can	
Scrambled eggs:			Tomatoes-----	#10 can	2	Beans, green-----	14-oz	8
Eggs-----	doz	13	Boiled potatoes:			bottle		
Milk, evaporated--	#1 can	3	Potatoes, white--	lb	35	Bread-----	#10 can	3
Bread-----	lb	12	Corn-----	#10 can	3	Butter-----	lb	12
Butter-----	lb	2	Bread-----	lb	12	Cookies-----	lb	2
Jam-----	2-lb jar	3	Butter-----	lb	2	Coffee, R and G----	lb	14
Coffee, R and G----	lb	3	Jam-----	2-lb jar	3	Milk, evaporated--	#1 can	3
Milk, evaporated--	#1 can	4	Apples, eating-----	ea	100	Sugar, granulated--	lb	4
Sugar, granulated--	lb	3	Cocoa ¹ -----	lb	3	Ice Cream-----	gal	3¼
			Milk, evaporated--	#1 can	20			
			Sugar, granulated--	lb	5			

¹ Fresh milk, if available, to be used in lieu of cocoa at rate of 25 quarts per 100 men.

SUPPLIES FOR PAPER SERVICE

Plates, paper, 9''-----	ea	110	Plates, paper, 9''-----	ea	110	Plates, paper, 9''-----	ea	110
Cups, paper, 8-oz. ² -----	ea	110	Cups, paper, 8-oz. ² -----	ea	110	Plates, dessert, paper,	ea	110
Forks, paper-----	ea	110	Forks, paper-----	ea	110	5''.		
Spoons, paper-----	ea	110	Spoons, paper-----	ea	110	Cups, paper, 8-oz. ² -----	ea	110
						Forks, paper-----	ea	110
						Spoons, paper-----	ea	110

² Hot liquid type.

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Ingredients—100 Men

Issue Chart for Menu No. 4

Perishable items	Unit	Breakfast	Dinner	Supper	Total
Eggs.....	doz.....	13			13
Ice cream.....	gal.....			3¼	3¼
Butter.....	lb.....	2	2	2	6
Oranges.....	ea.....	100			100
Potatoes, white.....	lb.....		35		35
Apples, eating.....	ea.....		100		100

NONPERISHABLE ITEMS

Corned beef hash.....	5½-lb can.....			7	7
Pork sausages.....	2-lb can.....	15			15
Salmon.....	1-lb can.....		25		25
Milk, evaporated.....	#1 (14½-oz) can.....	7	20	4	31
Sugar, granulated.....	lb.....	3	5	3	11
Jam.....	2-lb jar.....	3	3		6
Bread.....	lb.....	12	12	12	36
Cookies.....	lb.....			14	14
Beans, green.....	#10 can.....			3	3
Tomatoes.....	#10 can.....		2		2
Catsup.....	14-oz bottle.....			8	8
Corn.....	#10 can.....		3		3
Coffee, R and G.....	lb.....	3		3	6
Cocoa ¹	lb.....		3		3

¹ Fresh milk, if available, to be used in lieu of cocoa at rate of 25 quarts per 100 men.

SUPPLIES FOR PAPER SERVICE

Plates, paper, 9''.....	ea.....	110	110	110	330
Plates, dessert, paper, 5''.....	ea.....	110			110
Cups, paper, 8-oz ²	ea.....	110	110	110	330
Forks, paper.....	ea.....	110	110	110	330
Spoons, paper.....	ea.....	110	110	110	330

² Hot-liquid type.

Menu No. 5

Breakfast

Oranges
Bacon
Fried eggs
Bread
Butter
Jam
Coffee

Dinner

Fried luncheon meat
Potatoes
Carrots
Pickles
Bread
Butter
Fresh fruit
Coffee

Supper

Meat and vegetable stew
Asparagus
Bread
Butter
Pineapple
Cocoa

Ingredients	Unit	Number	Ingredients	Unit	Number	Ingredients	Unit	Number
Oranges.....	ea	100	Fried luncheon meat:			Meat and vegetable	30-oz can	25
Bacon.....	lb	15	Luncheon meat.....	6-lb can	6	stew.		
Eggs.....	doz	17	Flour, wheat.....	lb	2	Asparagus.....	#10 can	3
Bread.....	lb	12	Eggs.....	doz	1	Bread.....	lb	12
Butter.....	lb	2	Milk, evaporated.....	#1 can	3	Butter.....	lb	2
Jam.....	2-lb jar	3	Potatoes, white.....	lb	35	Pineapple.....	#10 can	5
Coffee, R and G.....	lb	3	Carrots.....	#10 can	3	Cocoa ¹	lb	3
Milk, evaporated.....	#1 can	4	Pickles.....	gal	1	Milk, evaporated.....	#1 can	20
Sugar, granulated.....	lb	3	Bread.....	lb	12	Sugar, granulated.....	lb	5
			Butter.....	lb	2			
			Fresh fruit ²	ea	100			
			Coffee, R and G.....	lb	3			
			Milk, evaporated.....	#1 can	4			
			Sugar, granulated.....	lb	3			

¹ Fresh milk, if available, to be used in lieu of cocoa at rate of 25 quarts per 100 men.² See list of fresh fruits in information sheets.

SUPPLIES FOR PAPER SERVICE

Plates, paper, 9".....	ea	110	Plates, paper, 9".....	ea	110	Plates, paper, 9".....	ea	110
Cups, paper, 8-oz. ³	ea	110	Cups, paper, 8-oz. ³	ea	110	Plates, dessert, paper, 5".....	ea	110
Forks, paper.....	ea	110	Forks, paper.....	ea	110	Cups, paper, 8-oz. ³	ea	110
Spoons, paper.....	ea	110	Spoons, paper.....	ea	110	Forks, paper.....	ea	110
						Spoons, paper.....	ea	110

³ Hot liquid type.

Ingredients—100 Men

Issue Chart for Menu No. 5

Perishable Items	Unit	Breakfast	Dinner	Supper	Total
Bacon	lb	15			15
Eggs	doz	17	1		18
Butter	lb	2	2	2	6
Oranges	ea	100			100
Potatoes, white	lb		35		35
Fresh fruit ¹	ea		100		100

NONPERISHABLE ITEMS

Meat and vegetable stew	30-oz can			25	25
Luncheon meat	6-lb can		6		6
Milk, evaporated	#1 (14½-oz) can	4	7	20	31
Sugar, granulated	lb	3	3	5	11
Jam	2-lb jar	3			3
Bread	lb	12	12	12	36
Flour, wheat	lb		2		2
Asparagus	#10 can			3	3
Carrots	#10 can		3		3
Pineapple (sliced if available)	#10 can			5	5
Coffee, R and G	lb	3	3		6
Cocoa ²	lb			3	3
Pickles	gal		1		1

¹ See list of fresh fruits in information sheets.

² Fresh milk, if available, to be used in lieu of cocoa at rate of 25 quarts per 100 men.

SUPPLIES FOR PAPER SERVICE

Plates, paper, 9"	ea	110	110	110	330
Plates, dessert, paper, 5"	ea			110	110
Cups, paper, 8-oz. ³	ea	110	110	110	330
Forks, paper	ea	110	110	110	330
Spoons, paper	ea	110	110	110	330

³ Hot liquid type.

Menu No. 6

Breakfast

Apples
Bacon
Eggs, boiled
Bread
Butter
Jam
Coffee

Dinner

Baked chicken and gravy
Potatoes
Green lima beans
Bread
Butter
Cookies
Cocoa

Supper

Macaroni and cheese with to-
matoes
Green peas
Bread
Butter
Jam
Pears
Coffee

Ingredients	Unit	Num- ber	Ingredients	Unit	Num- ber	Ingredients	Unit	Num- ber
Apples, eating-----	ea	100	Baked chicken and			Macaroni and cheese		
Bacon-----	lb	15	gravy:			with tomatoes:		
Eggs, boiled-----	doz	17	Chicken, canned---	30-oz can	20	Macaroni-----	lb	10
Bread-----	lb	12	Flour, wheat-----	lb	2	Cheese, A. C-----	lb	7
Butter-----	lb	2	Potatoes, white-----	lb	35	Milk, evaporated---	#1 can	3
Jam-----	2-lb jar	3	Beans, green lima-----	lb	3	Tomatoes-----	#10 can	2
Coffee, R and G-----	lb	3	Bread-----	lb	12	Peas, green-----	#10 can	3
Milk, evaporated---	#1 can	4	Butter-----	lb	2	Bread-----	lb	12
Sugar, granulated---	lb	3	Cookies-----	lb	14	Butter-----	lb	2
			Cocoa ¹ -----	lb	3	Jam-----	2-lb jar	3
			Milk, evaporated---	#1 can	20	Pears-----	#10 can	5
			Sugar, granulated---	lb	5	Coffee, R and G-----	lb	3
						Milk, evaporated---	#1 can	4
						Sugar, granulated---	lb	3

¹ Fresh milk, if available, to be used in lieu of cocoa at rate of 25 quarts per 100 men.

SUPPLIES FOR PAPER SERVICE

Plates, paper 9''-----	ea	110	Plates, paper, 9''-----	ea	110	Plates, paper, 9''-----	ea	110
Cups, paper, 8-oz. ² ---	ea	110	Cups, paper, 8-oz. ² ---	ea	110	Plates, dessert, paper,		
Forks, paper-----	ea	110	Forks, paper-----	ea	110	5''-----	ea	110
Spoons, paper-----	ea	110	Spoons, paper-----	ea	110	Cups, paper, 8-oz ² ---	ea	110
						Forks, paper-----	ea	110
						Spoons, paper-----	ea	110

² Hot liquid type.

Ingredients—100 Men

Issue Chart for Menu No. 6

Perishable items	Unit	Breakfast	Dinner	Supper	Total
Bacon.....	lb.....	15			15
Eggs.....	doz.....	17			17
Butter.....	lb.....	2	2	2	6
Cheese, A. C.....	lb.....			7	7
Potatoes, white.....	lb.....		35		35
Apples, eating.....	ea.....	100			100

NONPERISHABLE ITEMS

Chicken, canned.....	30-oz can.....		20		20
Milk, evaporated.....	#1 (14½-oz) can.....	4	20	7	31
Sugar, granulated.....	lb.....	3	5	3	11
Jam.....	2-lb jar.....	3		3	6
Bread.....	lb.....	12	12	12	36
Flour, wheat.....	lb.....		2		2
Cookies.....	lb.....		14		14
Macaroni, dry.....	lb.....			10	10
Peas, green.....	#10 can.....			3	3
Tomatoes.....	#10 can.....			2	2
Beans, green lima.....	#10 can.....		3		3
Pears.....	#10 can.....			5	5
Coffee, R and G.....	lb.....	3		3	6
Cocoa ¹	lb.....		3		3

¹ Fresh milk, if available, to be used in lieu of cocoa at rate of 25 quarts per 100 men.

SUPPLIES FOR PAPER SERVICE

Plates, paper, 9".....	ea.....	110	110	110	330
Plates, dessert, paper, 5".....	ea.....			110	110
Cups, paper, 8-oz ¹	ea.....	110	110	110	330
Forks, paper.....	ea.....	110	110	110	330
Spoons, paper.....	ea.....	110	110	110	330

¹ Hot liquid type.

Menu No. 7

Breakfast

Oranges
Cheese omelet
Bread
Butter
Jam
Coffee

Dinner

Chili con carne
Spinach
Pickles
Bread
Butter
Apricot halves
Coffee

Supper

Vienna sausages
Mustard and catsup
Potatoes
Green beans
Bread
Butter
Peaches
Cocoa¹

Ingredients	Unit	Num-ber	Ingredients	Unit	Num-ber	Ingredients	Unit	Num-ber
Oranges-----	ea	100	Chili con carne-----	#10 can	6	Vienna sausages-----	24-oz can	15
Cheese omelet:			Spinach-----	#10 can	3	Mustard-----	gal	¼
Eggs-----	doz	13	Pickles-----	gal	1	Catsup-----	14-oz	5
Cheese, A. C.-----	lb	3	Bread-----	lb	12		bottle	
Milk, evaporated-----	#1 can	3	Butter-----	lb	2	Potatoes, white-----	lb	35
Lard-----	lb	2	Apricot halves-----	#10 can	5	Beans, green-----	#10 can	3
Bread-----	lb	12	Coffee, R and G-----	lb	3	Bread-----	lb	12
Butter-----	lb	2	Milk, evaporated-----	#1 can	4	Butter-----	lb	2
Jam-----	2-lb jar	3	Sugar, granulated-----	lb	3	Peaches-----	#10 can	5
Coffee, R and G-----	lb	3				Cocoa ¹ -----	lb	3
Milk, evaporated-----	#1 can	4				Milk, evaporated-----	#1 can	20
Sugar, granulated-----	lb	3				Sugar, granulated-----	lb	5

¹ Fresh milk, if available, to be used in lieu of cocoa at rate of 25 quarts per 100 men.

SUPPLIES FOR PAPER SERVICE

Plates, paper, 9"-----	ea	110	Plates, paper, 9"-----	ea	110	Plates, paper, 9"-----	ea	110
Cups, paper, 8-oz ² -----	ea	110	Plates, dessert, paper, 5"-----	ea	110	Plates, dessert, paper, 5"-----	ea	110
Forks, paper-----	ea	110	Cups, paper, 8-oz ² -----	ea	110	Cups, paper, 8-oz ² -----	ea	110
Spoons, paper-----	ea	110	Forks, paper-----	ea	110	Forks, paper-----	ea	110
			Spoons, paper-----	ea	110	Spoons, paper-----	ea	110

² Hot liquid type.

Ingredients—100 Men

Issue Chart for Menu No. 7

Perishable items	Unit	Breakfast	Dinner	Supper	Total
Eggs	doz	13			13
Cheese, A. C.	lb	3			3
Butter	lb	2	2	2	6
Lard	lb	2			2
Oranges	ea	100			100
Potatoes, white	lb			35	35

NONPERISHABLE ITEMS

Vienna sausages	24-oz can			15	15
Milk, evaporated	#1 (14½-oz) can	7	4	20	31
Sugar, granulated	lb	3	3	5	11
Jam	2-lb jar	3			3
Bread	lb	12	12	12	36
Chile con carne	#10 can		6		6
Spinach	#10 can		3		3
Beans, green	#10 can			3	3
Catsup	14-oz bottle			5	5
Apricot halves	#10 can		5		5
Peaches	#10 can			5	5
Coffee, R and G	lb	3	3		6
Cocoa ¹	lb			3	3
Pickles	gal		1		1
Mustard, prepared	gal			¼	¼

¹ Fresh milk, if available, to be used in lieu of cocoa at rate of 25 quarts per 100 men.

SUPPLIES FOR PAPER SERVICE

Plates, paper, 9"	ea	110	110	110	330
Plates, dessert, paper, 5"	ea		110	110	220
Cups, paper, 8-oz ²	ea	110	110	110	330
Forks, paper	ea	110	110	110	330
Spoons, paper	ea	110	110	110	330

² Hot liquid type.

34. Salt and Pepper Issues (Superseded)

The following cumulative amounts of salt and pepper are listed to cover running totals for 7 days for 100 men.

Unit	1 day	2 days	3 days	4 days	5 days	6 days	7 days
Salt-----lb-----	3	6	8	10	12	14	16
Pepper-----oz-----	3	6	8	10	12	14	16

35. Fruit Substitution Chart and Quantities for 100 men (Superseded)

FRESH FRUITS			CANNED FRUITS			DRIED FRUITS		
Number	Unit	Fruit	Number	Unit	Fruit	Number	Unit	Fruit
<i>Citrus Fruits</i>			<i>Citrus Fruits and Juices</i>					
50	each	Grapefruit	3	#10 can	Grapefruit sections	—		
100	each	Oranges	4	#10 can	Grapefruit juice	—		
100	each	Tangerines			—	—		
<i>Other Fruits</i>			<i>Other Fruits and Juices</i>					
100	each	Apples, eating	5	#10 can	Apricots	7	lb	Apricots
100	each	Apricots			—	—		
100	each	Bananas	5	#10 can	Cherries, sweet	—		
		—	5	#10 can	Figs	7	lb	Figs
		—	5	#10 can	Fruit cocktail	—		
30	lb	Grapes			—	—		
100	each	Peaches	5	#10 can	Peaches	7	lb	Peaches
100	each	Pears	5	#10 can	Pears	7	lb	Pears
		—	5	#10 can	Pineapple, sliced or broken slices	—		
		—	4	#10 can	Pineapple juice	—		
100	each	Plums	5	#10 can	Plums	7	lb	Prunes
		—	4	#10 can	Tomato juice	—		

36. Recipes

* * * * *

f. MACARONI WITH CHEESE AND TOMATOES

Yield: 100 Portions

Ingredients	Weights	Measures
* * *	* *	*
Tomatoes-----	2 No. 10 cans	
Cheese, American, chopped.	7 pounds	(5 No. 56 dip-pers).
Salt (to taste)-----		
Pepper (to taste)---		
* *	* *	*

k. COCOA

Yield: 100 Portions

Ingredients	Weights	Measures
Milk, evaporated---	20 14½-ounce cans	
Water (for milk)---	4 gallons	(16 No. 56 dip-pers). *
* *	* *	*
Water, cold-----	1 gallon	(4 No. 56 dip-pers). *
* *	* *	*

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The Adjutant General

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WAR DEPARTMENT TECHNICAL MANUAL

TM 10-206

This manual supersedes paragraphs 34 and 45 and figures 42 and 61, TM 10-400, 15 November 1944; and SB 10-63, 4 May 1944, including C 1, 16 September 1944.

KITCHEN CARS

SUPPLIES, EQUIPMENT,
AND RATIONS



WAR DEPARTMENT

JUNE 1945

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Washington 25, D. C., 16 June 1945

TM 10-206, Kitchen Cars—Supplies, Equipment, and Rations, is published for the information and guidance of all concerned.

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CHAPTER I

INTRODUCTION

1. Purpose of Manual

The purpose of this manual is to prescribe uniform procedures pertaining to the supply and equipment of kitchen cars, particularly those serving group movements of casualties. Troops moving as complete organizations will be guided by these instructions, but they will use their organizational equipment for the preparation of any meals required en route; provisions of this manual for the issue and return of equipment do not apply to troops moving as complete organizations. The provisions of this manual do not apply to hospital trains.

2. References

All persons responsible for the preparation and operation of kitchen cars should become thoroughly familiar with the regulations and instructions contained in the following publications:

- a. AR 30-2215, Meal Tickets.
- b. AR 55-130, Transportation of Troops and other Groups; General.
- c. AR 55-135, Transportation of Troops; Railway Equipment.
- d. WD Pamphlet 20-7, Troop Train Commander's Guide.
- e. TM 10-205, Mess Management and Training.
- f. Current War Department directives.

3. Types of Cars

Messing facilities for troop trains are provided by the following types of kitchen cars:

- a. *Kitchen baggage cars* require the temporary issue of complete cooking equipment, water storage containers, improvised ice boxes, cooks' tables and cooking fuel containers.
- b. *Troop kitchen cars* are converted freight cars which are permanently equipped with certain installed equipment which includes coal-burning ranges, ice boxes, wash sinks, hot- and cold-water tanks and storage cupboards. Temporary equipment required to operate messes from these cars is confined to the utensils listed in chapter 3.

4. When Used

In all movements of 100 persons or more, of 24 hours' duration or longer, troop kitchen cars (if available—otherwise kitchen baggage cars) will be used for subsisting persons en route. In other movements of 100 or more persons for a journey of less than 24 hours' duration, or in movements of less than 100 persons regardless of the duration of the journey, consideration may be given to the use of kitchen cars, if available, for subsisting persons en route. When kitchen cars are not available, personnel will be subsisted by means of meal tickets as prescribed in AR 30-2215.

5. Care of Equipment

a. It is necessary that kitchen car equipment be carefully issued, properly cared for, and promptly returned for reuse. AR 55-135 requires that shipping containers to be used for the return of equipment be supplied at point of origin. This regulation also delegates responsibility for the dismantling and prompt return of equipment at destination.

b. In order to accomplish the effective issue and return of equipment required for kitchen cars, this manual establishes standard lists of equipment and methods of packing to be followed by all concerned. Variations in the equipment prescribed herein will be made only in cases where standard items cannot be made available in time for scheduled train departures. In such cases the nearest usable substitute must be issued in lieu of the standard item. Class B equipment will be used, whenever available, in preference to class A. In no case will supply officers issue useless items or obsolete equipment to get rid of undesirable stocks.

c. In order to conserve time, manpower and materials, it is necessary that shipping containers be reused as many times as possible. Boxes and crates must be properly constructed, and carefully preserved when not in use. Tag all empty containers to identify them. When returning equipment, use removable tags or cards for addressing boxes and crates. When containers are being reused, be sure

all addresses used for earlier shipments are removed or obliterated.

d. Care must be exercised in the disposal of paper subsistence items. These items, after use, will be neatly placed in empty subsistence containers such as paper boxes, crates, etc., and transferred to railroad trash cans at depots along the route. In this manner the empty boxes, crates, etc., may be reused for this purpose until the destination is reached.

6. Responsibilities

The following procedures will be followed for the issue and return of kitchen equipment used on trains carrying casualties:

a. Station Commanders. (1) The station commander at the point of origin will be responsible that:

(a) Required equipment is provided the train quartermaster in the types and quantities prescribed in this manual.

(b) Equipment is properly installed in kitchen cars.

(c) Containers are provided as prescribed in this manual, for packing and return shipment of kitchen equipment to station of origin, and are in the cars on departure.

(d) Bill of lading covering the return shipment, completely prepared in detail by the transportation officer, and properly marked shipping tags are supplied the train quartermaster prior to departure.

(2) The station commander at destination will be responsible that:

(a) Personnel are furnished the train quartermaster to dismantle and pack for return shipment the kitchen equipment.

(b) Shipment of kitchen equipment to station of origin is made immediately by the transportation officer upon receipt of bill of lading from the train quartermaster. Such shipment will be made by either freight or express in accordance with AR 55-135, whichever of these two methods fits the military needs in each case.

(c) In the event the train quartermaster is not returning to the station of origin, a disinterested officer is designated to check the equipment prior to packing for return shipment. The train quartermaster and the disinterested officer will prepare a list of all property on WD AGO Form 10-144, Tally sheet-Incoming, in triplicate, and certify to the correctness thereof on each copy. Copies of the turn-in slip will be distributed to the issuing accountable station supply officer, the train quartermaster, and the station commander at origin.

b. The train quartermaster will be responsible that:

(1) All equipment issued is cared for properly while in his custody.

(2) Bill of lading for return shipment is turned over to the commanding officer at destination for his transportation officer.

(3) In the event the train quartermaster is not returning to the station of origin, a request is made to the commanding officer at station of destination for a disinterested officer to check all equipment prior to packing.

7. Sanitation and Reports

a. Commanding officers at points of entrainment; train commanders, or persons in charge of movements while en route; and commanding officers at points of detrainment will give special attention to the matter of cleanliness of kitchen cars and equipment. Prior to entrainment, such cars and equipment will be inspected at entrainment point by the station commander or his representative, together with the train commander or person in charge of the movement, to insure clean and sanitary conditions.

b. Any unclean or unsanitary conditions will be corrected by personnel under control of the station commander prior to entrainment of the troops, and a report made by the station commander direct to the Chief of Transportation, copy to the commanding general of the appropriate service command, identifying the car in question by initials and numbers. Such report will include a short statement of unsatisfactory conditions found and make reference to the routing order or main serial number of the movement for which the car is then being furnished.

c. It is the responsibility of the train commander or person in charge to see that kitchen equipment and interiors of kitchen cars are maintained in a clean and sanitary condition by his personnel at all times en route, and that the cars are released at the destination in a clean and sanitary condition.

d. The station commander, or his representative, at detrainment point will inspect the kitchen cars in company with the train commander prior to releasing them to the carriers. Any unsanitary or unsatisfactory conditions found that are not corrected by personnel under command of the train commander will be corrected by personnel under command of the station commander and a report covering these deficiencies will be made as prescribed in *b* above.

e. Reports of unsatisfactory equipment furnished by carriers will be handled by the Chief of Trans-

portation with the railroads at fault to prevent recurrence. Where reports from station commanders indicate noncompliance by military personnel with this directive that kitchen cars be maintained and released in a clean and sanitary condition, the Chief

of Transportation will ascertain the unit or organization which last used the car and forward the report to the commanding general of the major command concerned who will take the necessary disciplinary action.

CHAPTER 2

KITCHEN BAGGAGE CARS

Section I. EQUIPMENT

8. Standard M1937 Field Range

This equipment must be used on all kitchen baggage cars. Station supply officers will make every effort to determine their requirements for troop train equipment far enough in advance to maintain sufficient stocks of M1937 field ranges for this purpose. Quantities of equipment issued and methods of installation will be as prescribed in this manual. Never issue Army field ranges No. 1, or similar limited standard or nonstandard equipment, for use in kitchen baggage cars, except in emergencies when prescribed items cannot be made available in time for scheduled departure of troop trains.

9. Quantities

a. Kitchen cars are normally authorized to serve troop strengths ranging from 100 to 250 men. They will be used under the following conditions:

(1) One kitchen car will be furnished provided the accompanying party consists of not less than 100 persons presenting one way or round trip tickets good for transportation in coaches or sleeping car service through from points of origin to destination.

(2) For group movements exceeding 100 in number, one kitchen car will be provided for each 250 persons or fraction thereof. For example: For a party of 250 one kitchen car will be provided; for a party exceeding 250, and not in excess of 500, two kitchen cars will be provided, except as provided in (3) below.

(3) In certain instances groups of 100 and less than 250 originate at different points and are consolidated at intermediate points. Inasmuch as each point of origin provides kitchen equipment and rations to be consumed en route, kitchen cars from each point will be transported through to destination in order to subsist the personnel, notwithstanding that the total movement may be less than 250 persons.

b. Because of the basis upon which kitchen cars are furnished, the required number of field ranges varies. Station commanders will be responsible that equipment for kitchen baggage cars to be used for movements originating at their stations is issued on the following basis: For strengths of less than 200 men, one each of units A, D, and X, two of unit C, and three of unit B. For strengths of over 200 men, one each of Units A, D, and X, two of Unit C, and four of unit B. In addition, the following expendable supplies are to be issued per car:

Item	Less than 200 men	More than 200 men
Soap, ordinary issue, cakes	3 per day	5 per day
Lye, cans	2	3
Brushes, scrubbing	3	4
Rags, clean, lbs.	10	10
Brooms, corn	1	1

Usable brushes and brooms may be retained by supply officer at destination for reissue to other kitchen cars set up at that point.

c. The following equipment is contained in each unit:

- (1) *Unit A.* 1 Box, tool, for M-1937 field range, complete with required tools and repair parts.
 - 1 Cleaver, butchers, blade 8".
 - 1 Extinguisher, fire, carbon-tetrachloride, hand, 1-quart, w/wall bracket.
 - 1 Funnel, w/strainer, 1/2-quart.
 - 1 Machine, chopping, (grinding) meat and food, hand operated.
 - 3 Openers, can, hand.
 - 1 Pick, ice.
 - 1 Saw, butchers, 14" blade.
 - 1 Steel, butchers, length of blade 10".
 - 1 Stone, sharpening, mounted, medium grit 1" x 2" x 6".
 - 1 Whip, egg, 16".
- (2) *Unit B.* 1 Cabinet.

- 1 Cover, F.R., M-37, roasting pan, 2" x 17 $\frac{5}{8}$ " x 21 $\frac{1}{8}$ ".
- 2 Cover, F.R., M-37, cook pot, or insert.
- 1 Cradle, cook pot.
- 1 Dipper, 1-quart.
- 1 Fork, cook, flesh, length over-all 15".
- 1 Fork, cook, flesh, length over-all 21".
- 1 Insert, cook pot, 10 gal.
- 1 Knife, butcher, 10" blade.
- 2 Knife, paring.
- 1 Ladle, length over-all 21".
- 1 Pan, bake and roasting, field range, M-1937.
- 1 Pan, cake, 13 $\frac{3}{8}$ " x 16" x 19 $\frac{1}{2}$ ".
- 1 Plate, splash.
- 1 Pot, cook, heavy, 15-gal.
- 1 Protector, arm, long.
- 1 Protector, arm, short.

- 1 Skimmer, length, over-all 15".
 - 1 Spoon, basting, length over-all 15".
 - 1 Spoon, basting, length over-all 21".
 - 1 Turner, cake, length over-all 15".
 - 1 Unit, fire.
 - (3) Unit C. 2 Can, corrugated, nesting, galvanized, with cover 32-gallon capacity.
 - 4 Bucket, general-purpose, galvanized, heavy-weight, without lip, 14-quart.
 - (4) Unit D. 3* Drum, inflammable-liquid (gasoline), steel, with carrying handle, 5-gallon.
 - 1 Tube, flexible, nozzle
- or
- 2* Can, safety, steel (gasoline), 5-gallon.

*Quantity indicated is for minimum issue. If circumstances require transportation of extra gasoline, additional drums complete with "D" type boxes will be issued as required. Do not issue gasoline in single drums without providing "D" type box holders.

Section II. PACKING

10. Unit A

a. Pack unit A in a nailed, wooden box, with style 2 braced ends, 28 $\frac{1}{2}$ -inches long, 13 $\frac{1}{4}$ -inches wide, and 9-inches deep (inside measurements), constructed according to figure 1. Use lumber at least $\frac{3}{4}$ -inch thick throughout; end and cover cleats to be $\frac{3}{4}$ -inch by 2 $\frac{1}{4}$ -inches. All nails not clinched will be cement coated.

b. Fit the box with two heavy 6-inch strap hinges, fastened to back of box with carriage bolts and to inner side of cover with No. 9 gauge wood screws. The screws should be long enough to pass through the cover and through at least three-fourths of the thickness of the top cleats.

c. Secure the cover to sides and ends with No. 9 gauge screws, spaced approximately 3 $\frac{1}{2}$ inches apart at ends and 6 inches apart at sides, and long enough for two-thirds of each screw to be imbedded in the member holding the point.

11. Unit B

a. New M-1937 field ranges are ordinarily received in wirebound crates. Always use these crates for reshipping ranges for kitchen cars *when available*.

b. Since the wirebound crate is not normally available, a crate must usually be improvised. Make it of commercial standard 1-inch by 6-inch lumber, 3-way corner style, with diagonal braces in all faces. Inside dimensions will be: length 27-inches, width 24-inches, depth 44 $\frac{1}{2}$ -inches. All nails will be cement

coated, not less than 8 penny, and spaced not more than 2 $\frac{1}{2}$ -inches apart. The crate will be reinforced with two flat steel straps not less than $\frac{3}{4}$ -inch by .020-inch. (See fig. 2 and 3.)

12. Unit C

Each of the two C units consists of two 32-gallon cans and four buckets: Nest and wire the cans as follows:

a. Nest two 32-gallon cans, with handles in alignment, and tie them securely together with two 14-gauge annealed wires, fastened on opposite sides. Wire as follows: Pass one wire through the opening of one handle retainer of bottom can, between side wall of can and handle, up through the opening of the handle retainer of the top can. Twist the ends of the wire tightly to remove all slack, then turn the twisted portion of the wire down parallel to the side of the can. Repeat with the other wire, on the other side of the can.

b. Nest the four buckets and place them inside the top can. Pass annealed wire (not less than 14 gauge) through the opening of one handle retainer of the top can. Pass the two ends of the wire through the cover handle, and down to the handle retainer on the opposite side; then pass one end of the wire through the opening of the handle retainer. Twist the ends of the wire together tightly to remove all slack. Turn the twisted portion of the wire down parallel to the side of the can; be careful not to

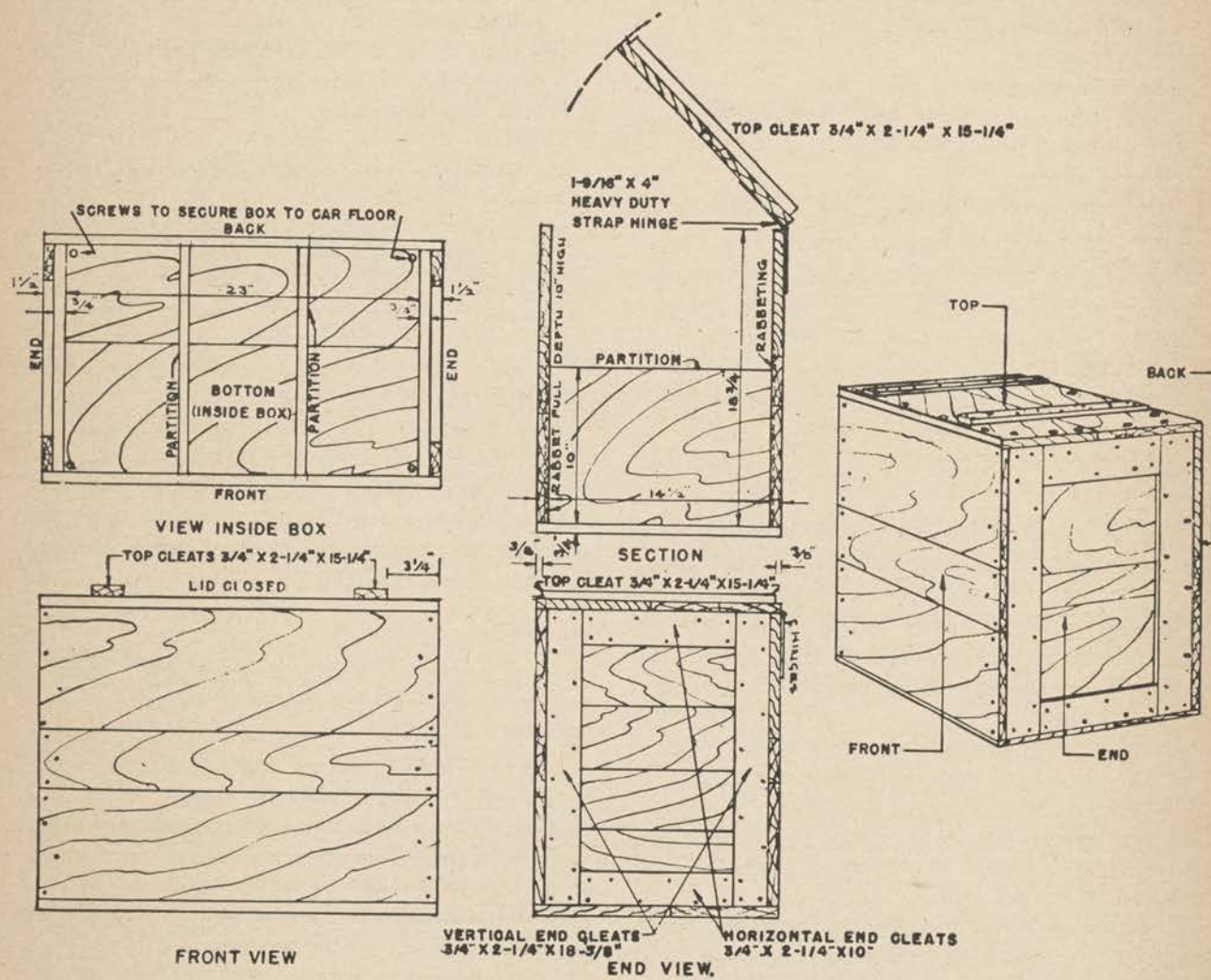
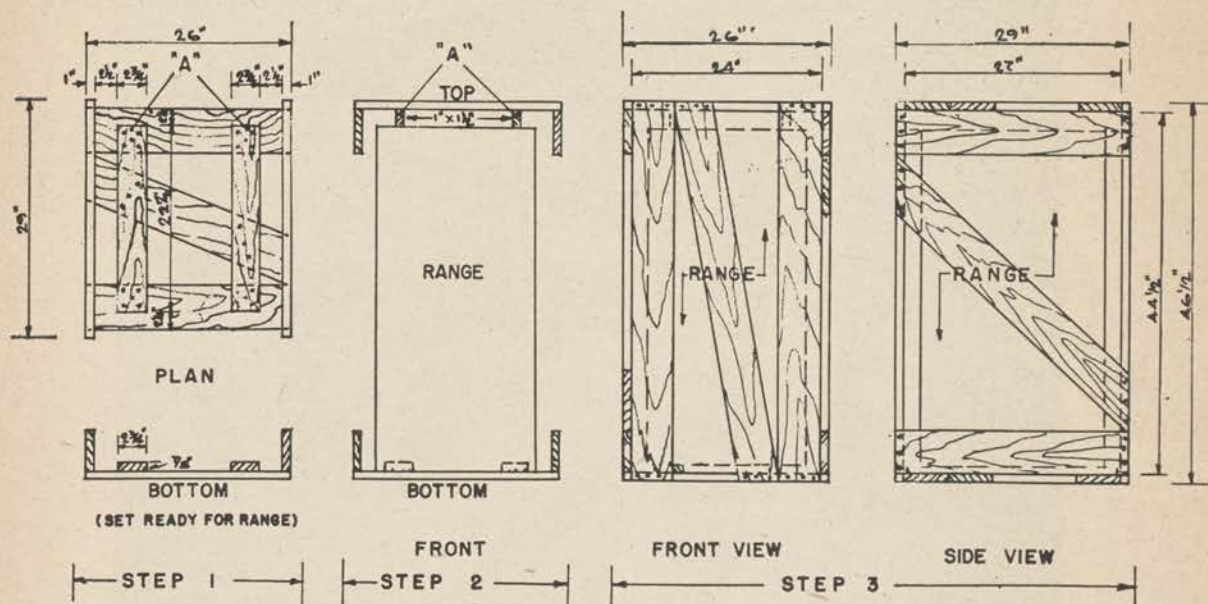


Figure 1. Construction of "A" box.



NOTE:

TOP CONSTRUCTION SAME AS
BOTTOM EXCEPT GLEATS.

TOP GLEATS "A" = WOOD STRIP 26" X 1" X 1-1/2"

BOTTOM CROSS PIECES "A" = WOOD BLOCK 7/8" X 2-3/4" X 22-1/2"

Figure 2. Construction of "B" crate.

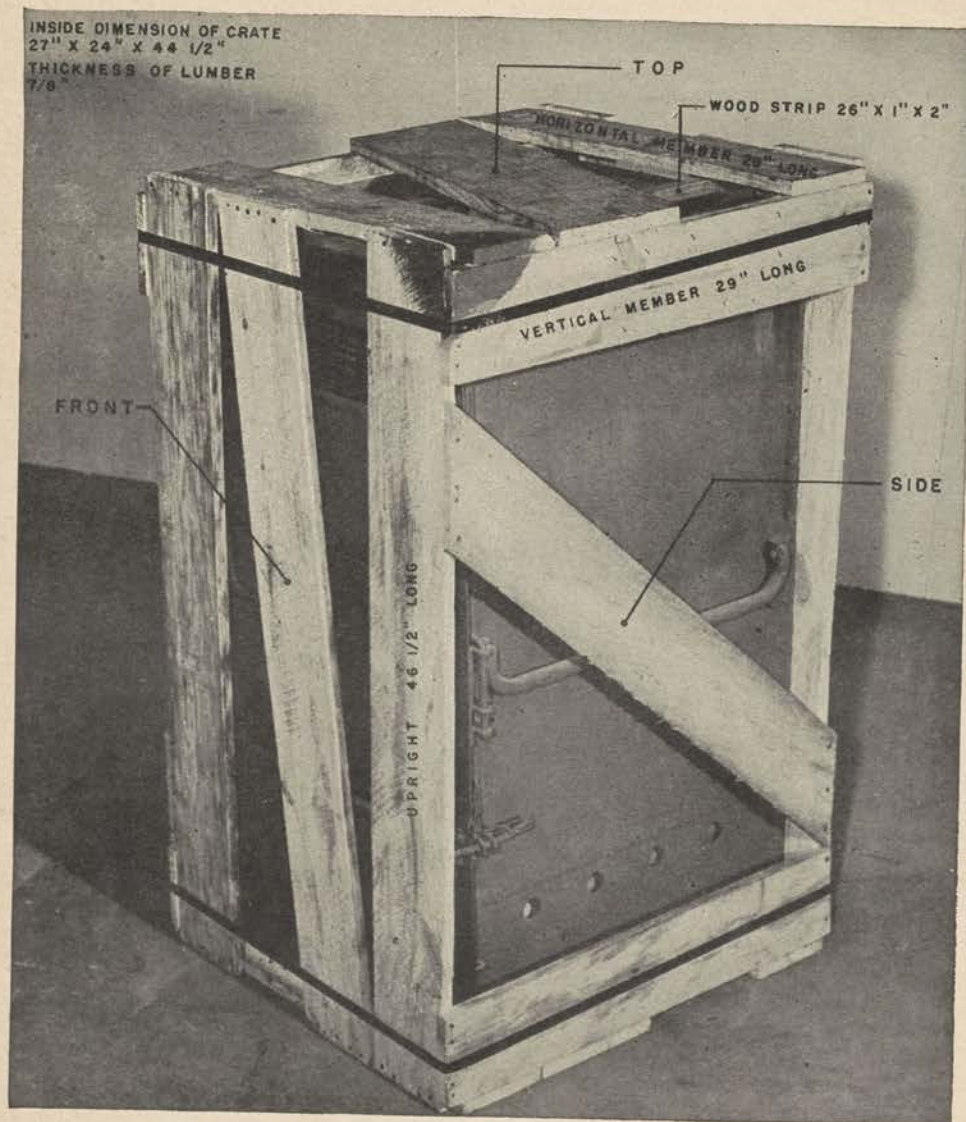


Figure 3. Complete Unit B.

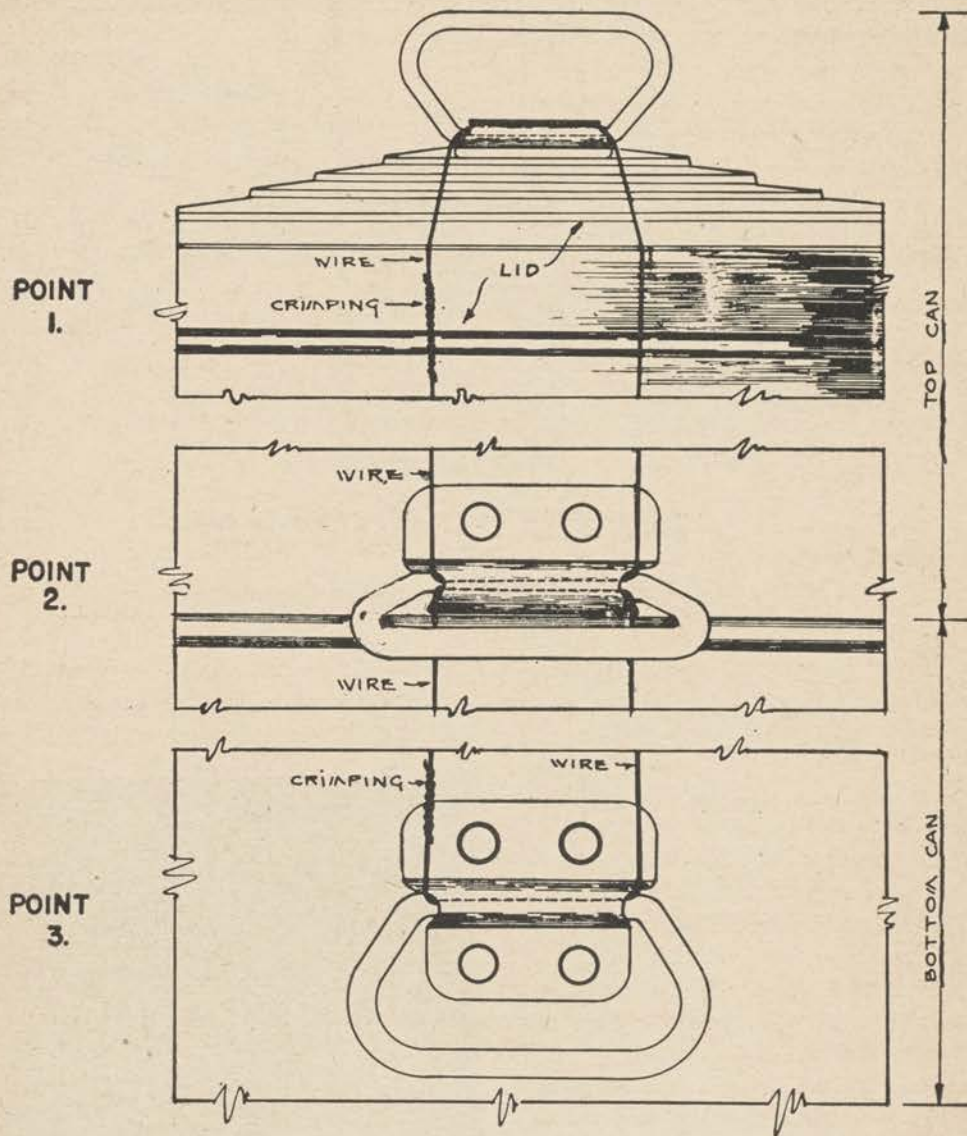


Figure 4. Wiring for Unit C.

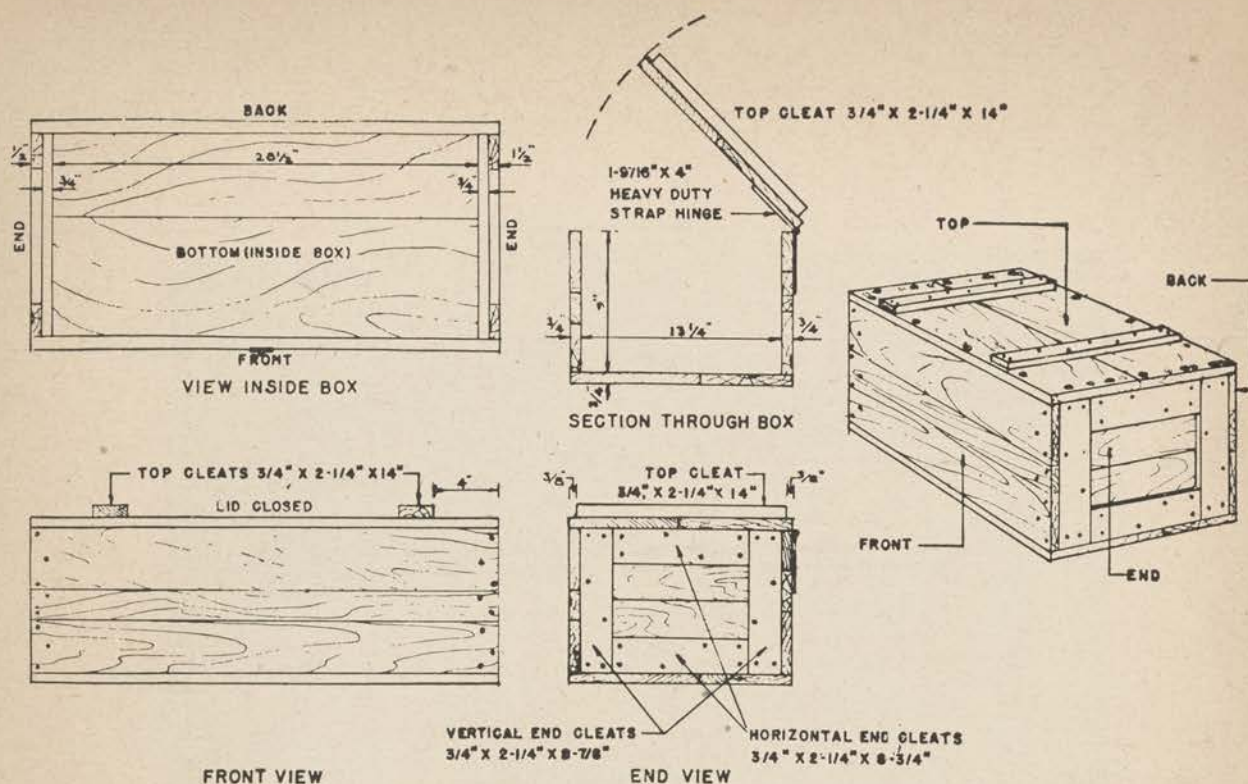


Figure 5. Construction of "D" box for standard 5-gallon drum.

leave the ends of the wire in an exposed position where they might cause injury.

13. Unit D

a. DRUM, INFLAMMABLE LIQUID, (GASOLINE) STEEL.

(1) Pack three 5-gallon gasoline drums in a nailed, wooden box, with style 2 braced ends, 23-inches long, 14½-inches wide, and 18¾-inches deep (inside measurements), constructed according to figure 5. Use lumber at least ¾-inch thick throughout; end and cover cleats to be ¾-inch by 2¼-inches. All nails not clinched will be cement coated.

(2) Drill one hole in each corner of the bottom, so that the box can be securely fastened to the floor of the car. Place four screws, of sufficient length for this purpose, in a cloth bag or an envelope, and tack the bag or envelope to the inside cover of the box.

(3) Divide the box into three equal parts, by rabbeting the sides to a depth of ¼-inch.

(4) Fit partitions of ¾-inch lumber snugly into the rabbets. The height of the partitions will be approximately half the depth of the box. Secure the partitions to sides and bottom with not less than 7-penny, cement-coated nails, spaced not more than 2½-inches apart.

(5) Fit the box with two heavy 6-inch strap hinges, fastened to back of box with carriage bolts and to inner side of cover with No. 9 gauge wood

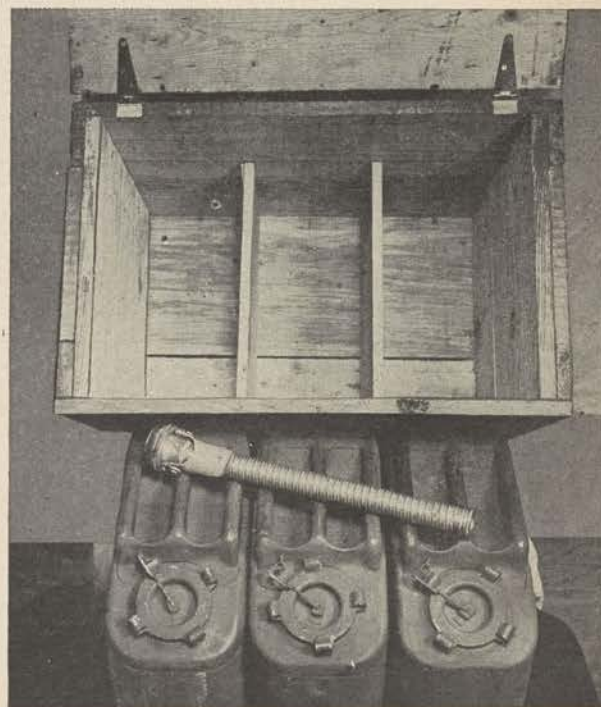


Figure 6. Unit (with three drums).

partition, $12\frac{1}{8}$ -inch by 10-inches by $\frac{3}{4}$ -inch, into the notched cleats and nail one cleat to each side of the box, equidistant from the inside ends, with the notched end of the cleat resting on the bottom of the box, thus dividing the interior of the box into two equal parts.

(4) Fit the box with two heavy 6-inch strap hinges, fastened to back of the box with carriage bolts and to inner side of cover with No. 9 gauge wood screws. The screws should be long enough to pass through the cover and through at least three-fourths of the thickness of the top cleats. All bolt-heads will be inside.

(5) Secure the cover to sides and ends with No. 9 gauge screws, spaced approximately $3\frac{1}{2}$ -inches apart at ends and 6-inches apart at sides, and long enough for two-thirds of each screw to be imbedded in the member holding the point.

(6) Paint the exterior of the box red with good grade oil paint. Stencil "DANGER—GASOLINE" on sides, ends and top, in black, waterproof ink, in letters not less than 2-inches in height.



Figure 8. Unit D (with two safety cans).

14. Unit X

a. Pack Unit X in a nailed, wooden box, with style 2 braced ends, $18\frac{1}{8}$ -inches long, $10\frac{1}{8}$ -inches wide, and $27\frac{3}{8}$ -inches deep (inside measurements),

constructed according to figure 9. Use lumber at least $\frac{3}{4}$ -inch thick throughout, end cleats to be $1\frac{1}{8}$ inch by $2\frac{3}{4}$ -inches, cover cleats, $\frac{3}{4}$ -inch by 3-inches. All nails will be clinched.

b. Secure sides and bottom to ends with No. 9 gauge wood screws, spaced approximately $3\frac{1}{2}$ -inches apart at ends and 6 inches apart at sides and long enough for approximately two-thirds of each screw to be imbedded in the member holding the point.

c. To each side of the box secure a cleat, $26\frac{5}{8}$ -inches by $\frac{3}{4}$ -inch by 2-inches, with the center $6\frac{1}{4}$ -inches from the left inside end of box. Secure a second cleat beside the first, with a space of $\frac{3}{4}$ -inch between them. The center of the second cleat will therefore be $9\frac{1}{8}$ -inches from the right end of the box. Place a partition, $26\frac{5}{8}$ -inches by $10\frac{1}{8}$ -inches by $\frac{3}{4}$ -inch, between each pair of cleats, dividing the interior of the box into two parts. Both the cleats and the partition will be secured with No. 9 gauge wood screws spaced approximately $3\frac{1}{2}$ -inches apart, and long enough for two-thirds of each screw to be imbedded in the member holding the point.

d. Secure cleat, $23\frac{3}{4}$ -inches by 1-inch by $1\frac{5}{16}$ -inches, to each side of the box with the center of the cleat $3\frac{5}{8}$ -inches from the left inside end of the box. The narrow side of the cleat will be against the side of the box, secured by No. 9 gauge wood screws spaced approximately $3\frac{1}{2}$ -inches apart and long enough for two-thirds of each screw to be imbedded in the member holding the point.

e. Place the two fire extinguishers, with brackets, in the box. The foam extinguisher fits the larger (right) compartment, and the carbontetrachloride extinguisher goes in the smaller (left) side.

f. With No. 9 gauge wood screws secure a cleat, $10\frac{1}{8}$ -inches by $1\frac{3}{4}$ -inches, to the tops of the cleats described in d above to secure the carbontetrachloride extinguisher.

g. Fit the box with two heavy 6-inch strap hinges, fastened to back of box with carriage bolts and to inner side of cover with No. 9 gauge wood screws. The screws should be long enough to pass through the cover and through at least three-fourths of the thickness of the top cleats.

h. Secure cover of box to sides and ends with No. 9 gauge wood screws, spaced approximately $3\frac{1}{2}$ -inches apart, and long enough for two-thirds of each screw to be imbedded in the member holding the point.

Figure 9. Construction of "X" box.

Section III. INSTALLATION OF EQUIPMENT

15. General

The equipment must be arranged to provide the most efficient possible food service to personnel in adjoining cars. A commissioned officer must supervise its installation.

16. Field Ranges

Place all the range cabinets along the wall of the car, on the right as you face the direction of movement. Leave a space of two inches between the side of the car and the ranges. Place a shield of sheet metal, 20 gauge or heavier, under the cabinets. The shield must cover the entire floor space occupied by the ranges, and extend four inches beyond the front edge. If the car has wooden sides, secure a metal sheet to the side of the car behind the ranges. Latch the ranges together with the pins and latches provided on the cabinets. Anchor the ranges with wooden blocks and tie-in chains provided in the field range tool box, as shown in figure 11. Secure the blocks to the floor of the car with 16-penny nails or with lag screws, whichever will cause less damage to the floor. Run the large hook on the outer end of the chain through a link of the chain to serve as a pull bar against the outer ends of the wooden blocks.

17. Safety Measures

a. An improvised hand hold, at a convenient height directly above the front of the cabinets, will

serve as an added convenience and safety measure for steadying cooks while they work at the ranges. It may be improvised from a piece of rope or a small board. This hand hold is optional; variations in cars make it impossible to give a specific design. A suggestion is shown in figure 12.

b. Nail two crosspieces of 2-inches by 4-inches lumber across each side door opening of the car. Place one about two feet from the floor, and the other four feet above the floor.

18. Gasoline

a. Either the standard 5-gallon gasoline drum or the 5-gallon steel safety can may be used for storing gasoline in kitchen cars. Substitutions for these containers will be issued only in cases of emergency, and must meet Interstate Commerce Commission Specification "ICC 5-L".

b. Gasoline containers must at all times (whether filled or empty) be kept capped and placed in a braced location. The "D" type boxes are especially designed to meet this safety requirement. When installing the equipment, screw the "D" type boxes to the floor, with the screws provided, as far away from the ranges as practicable. Place the gasoline containers in the boxes. At the end of the trip remove the boxes and use them for shipping containers for the return of the empty containers. Before placing the containers in the boxes, thoroughly drain all gasoline from them. When the standard

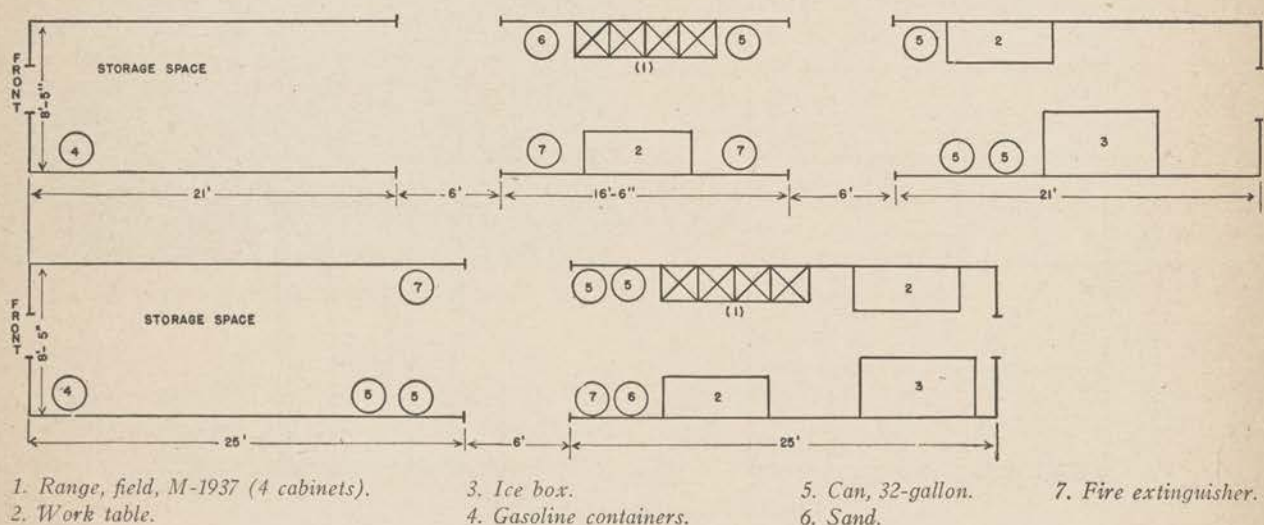


Figure 10. Lay-out of kitchen baggage car.

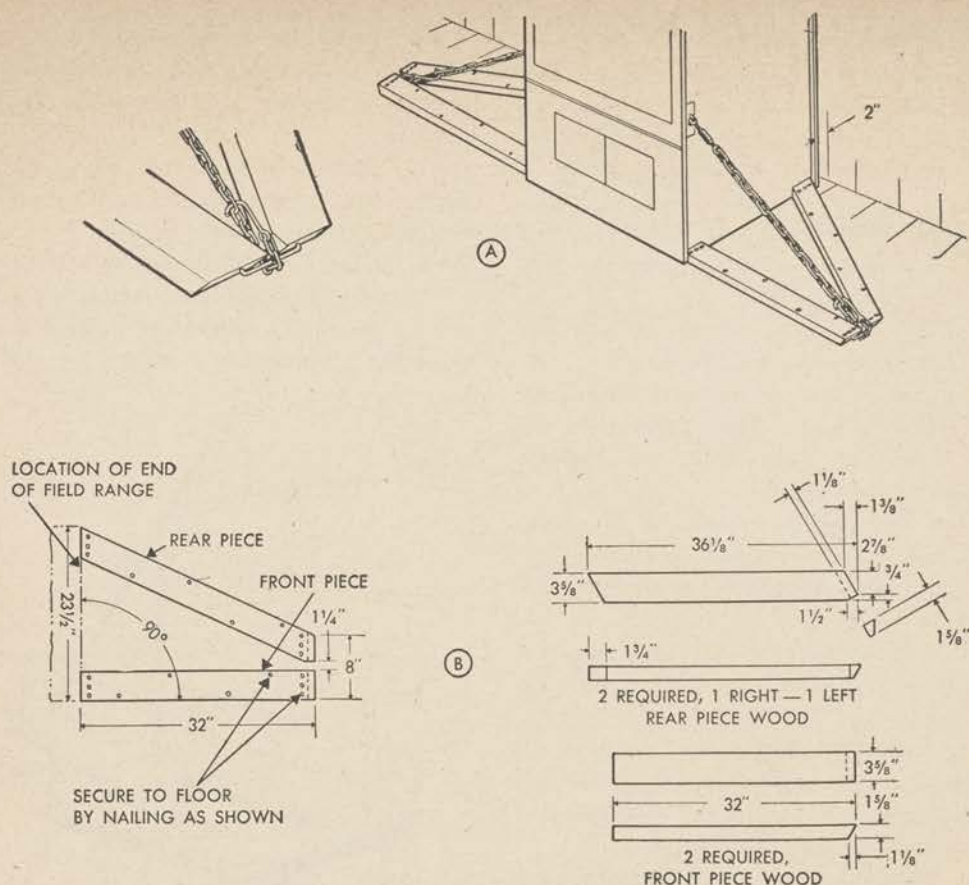


Figure 11. Securing cabinet in kitchen baggage car.

5-gallon drum is used, screw the top on wrench-tight. If additional gasoline is required it may be purchased en route according to instructions contained in current War Department directives.

c. On mixed trains a reserve supply of gasoline for cooking may be carried in a boxcar adjacent to the kitchen car. It will be kept at all times in standard "D" type boxes, securely screwed to the floor of the car. Care must be taken to prevent other material in the car from falling on the cans or sliding against them.

d. On the outside of the boxcar in which the reserve gasoline is carried, attach a placard bearing the word, "DANGEROUS," in large letters. Below it, place a second placard, 8-inches by 10-inches, reading, "EXTRA GASOLINE FOR COOKING PURPOSES." On the same card should appear the word, "INFLAMMABLE," in red letters.

e. Never transfer gasoline from one storage container to another while the containers are on or near the trains. Removal and replacement of gasoline and the refueling of fire units must be supervised by a commissioned officer. When practicable, refuel fire units outside the car, to avoid danger from spilled gasoline. When necessary to refuel inside the car,



Figure 12. Improved hand hold.

take the fire unit as far away from the ranges as possible. Never refuel a fire unit while there is any fire in the car or while the car is in motion. To make pouring easier and to avoid spilling gasoline, use the tube, flexible, nozzle with the standard 5-gallon drum.

f. Whenever fire units are shipped or stored, *fuel tanks must be thoroughly drained of gasoline*. The following is the proper method:

(1) Remove the fire unit to an open air area and prohibit open flames, sparks, and smoking.

(2) Close all valves, and drain the fuel tank by removing the fuel tank filler tube cap, inverting the fire unit, and raising the rear of the unit slightly, allowing the gasoline to escape.

(3) To eject the gasoline from the air tank, pump the fire unit up to 40 pounds pressure. Tilt the burner slightly forward and open the fuel tank filler tube cap slowly.

(4) Drain the fuel tank by inverting the fire unit and raising the rear of the unit slightly, allowing all gasoline to escape.

(5) As a special precaution, securely tighten all valves, all fittings, and the cap on the fuel tank.

g. The installation and use of the water heater unit in railway kitchen cars is prohibited.

h. The War Department has set up the following special procedure for kitchen cars passing through the tunnels which lead to the city of New York.

(1) All gasoline in fire units in containers must be removed from the car before the train enters the tunnels (entering or leaving the city) and replaced after the train has passed through.

(2) The railroad companies have made arrangements for removal and replacement of the gasoline.

i. One 1-gallon carbon-tetrachloride fire extinguisher, one antispash type foam extinguisher, and a bucket of sand must be installed in each car.

They will be placed as indicated in figure 10. For security, screw the extinguisher brackets to the floor or wall of the car, according to the type of bracket required.

j. If gasoline spills in the base of the cabinet and catches fire, remove the fire unit immediately with a hay hook or any similar handy tool. Aim a stream from the fire extinguisher at the base of the flame in the cabinet. Avoid inhaling fumes resulting from the use of the fire extinguisher. After using the extinguisher, thoroughly ventilate the car as soon as possible.

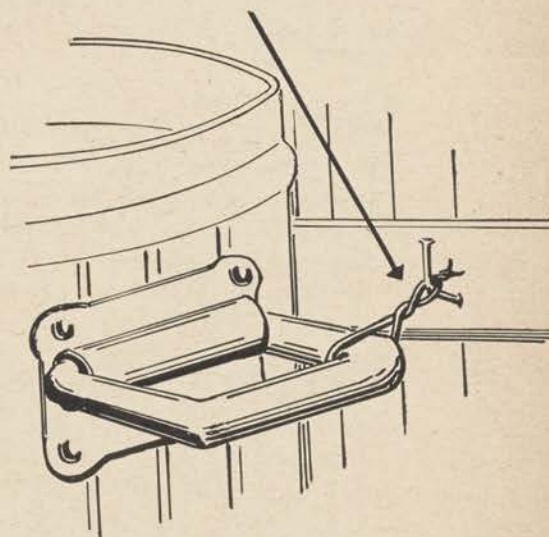
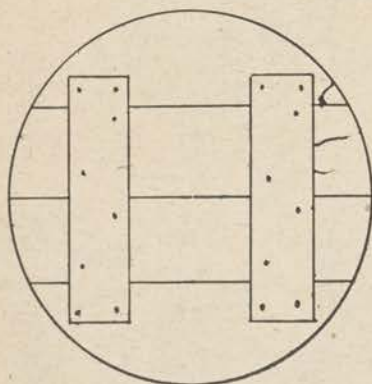
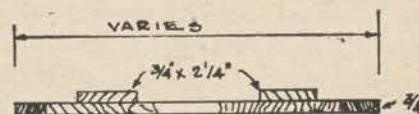


Figure 13. Securing can to wall.

k. Before returning the extinguishers to point of origin, empty the foam extinguisher and flush the interior with clear water. Release air pressure from the 1-gallon carbon-tetrachloride extinguisher. Pack extinguishers and brackets together as described in paragraph 14.



TOP VIEW



SIDE VIEW

Figure 14. Splash board.

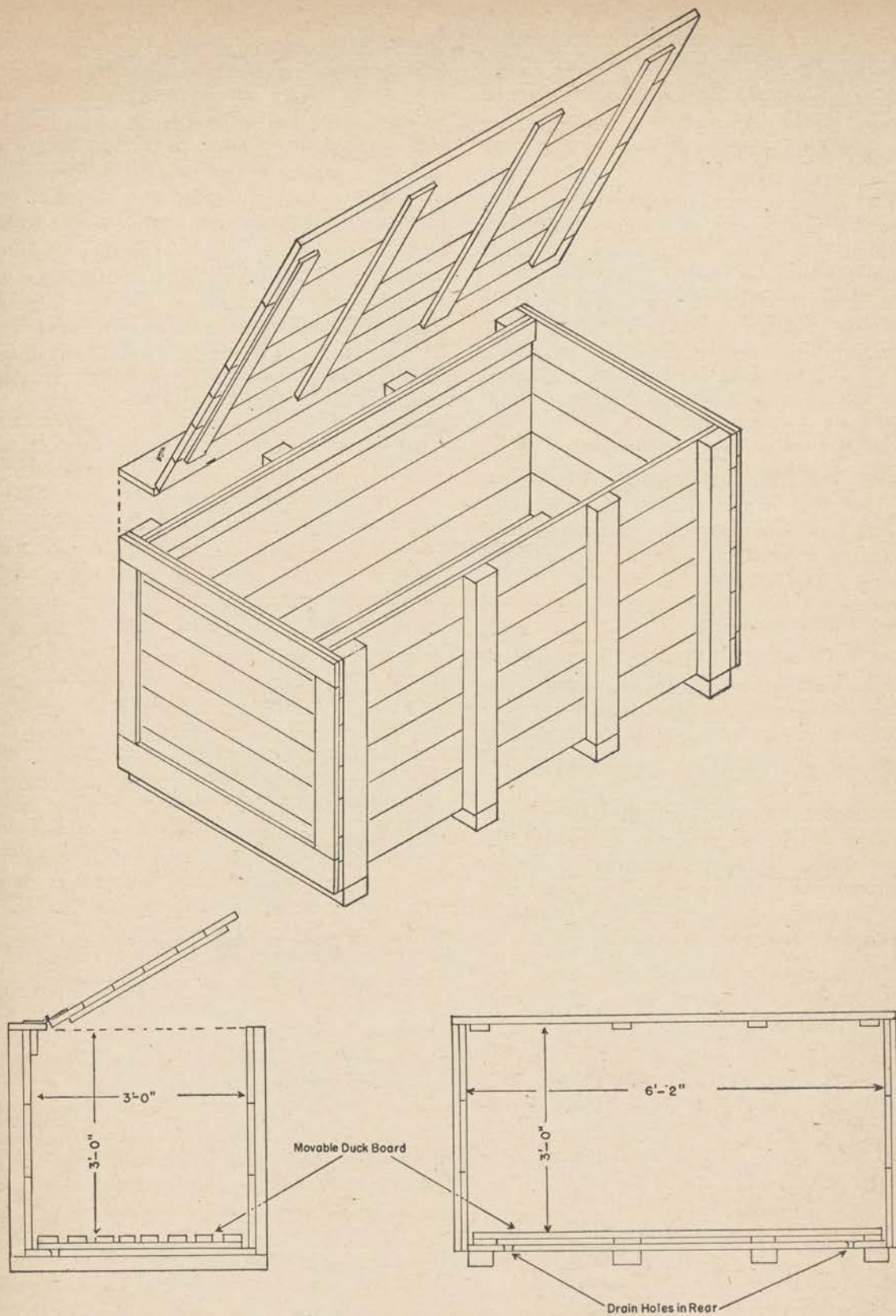


Figure 15. Improvised ice chest.

19. GI Cans

a. Place cans for garbage and for water storage near the doors to provide easier refilling or emptying. These cans may be made secure by attaching wire loops to handles and latching the loops to a bent nail or hook in the wall. (See fig. 13.)

b. Water stored in cans has a tendency to splash over the sides when the car is in motion. Improvised splash boards will combat this tendency. Construct these splash boards of clean, smooth lumber, as shown in figure 14. Make the diameter slightly less than the inside diameter of the can, to permit the board to float freely on the surface of the water. Before using, thoroughly scrub the splash board with hot, soapy water, then rinse with clear water.

20. No Smoking

It is essential that smoking in kitchen cars be prohibited. Not only is this necessary as a sanitary measure, as in all kitchens, but the presence of gasoline in the car makes the prohibition of smoking a necessary safety precaution.

21. Nonreturnable Equipment

a. Ice chests and cooks' tables must be improvised. These items are not to be returned to point of origin at the termination of the trip. However, supply officers at destination will retain this nonreturnable equipment for possible future use in kitchen cars that may be made up at their own stations.

b. The suggested ice chest and cooks' table shown in figures 15 and 16 are based on the requirements to provide equipment that is adequate for the intended purpose but which can be constructed at a minimum cost of material and labor. Salvaged materials will be used whenever practicable.

c. The work tables will be at least 6 feet long, 2 feet 6 inches wide, and 2 feet 8 inches high. Each kitchen baggage car will be supplied with two of these tables. As a safety precaution the table legs may be toenailed to the floor of the car.

d. Because the standard troop train ration prescribed in chapter 4, provides for the consumption of the more highly perishable subsistence at the beginning of the trip, and because ice is available along railroad routes, there is no necessity for an expensive, insulated, circulating refrigerator. It is necessary only to provide a container which will enable perishables to be stored in direct contact with the ice. It will be a sturdy, wooden box, properly drained, and proportioned to provide a maximum surface of ice exposed to the food.

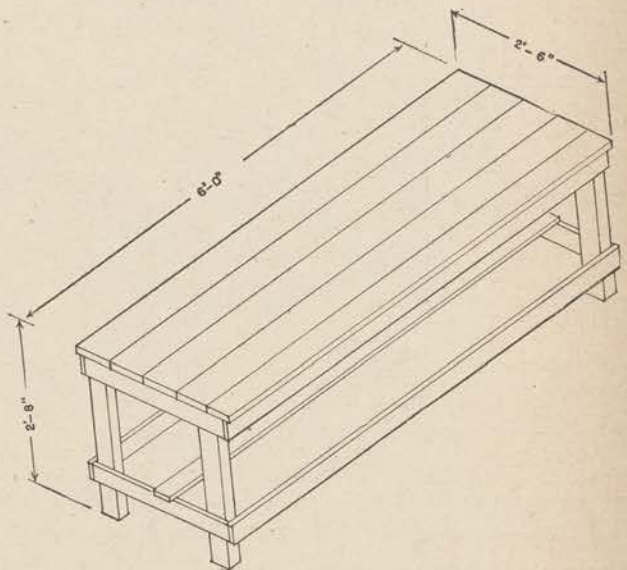


Figure 16. Improvised work table.

TROOP KITCHEN CARS

22. Instructions for Personnel

Several types of troop kitchen cars are used. Figures 17 and 18 show the water systems in two types in use. The following instructions apply to all types:

a. Carefully read the instructions, on the bulletin board in the car, for operating devices in the car.

b. Do not remove any permanent fixtures from the car.

c. Do not throw anything from the car.

d. Keep all garbage and other waste material in corrugated cans. Ask the conductor to advise the points at which this waste material may be deposited.

e. Never turn on lights when temperature in car is below freezing. Turn off all lights when not needed. Extra light bulbs and supply of emergency candles may be found in a compartment in the car. Never disturb batteries or battery wires.

f. (1) In cars numbered K-100 to K-499 inclusive, never start fire in range until boiler is full of water; the heater will burst if cold water is turned into it when hot. See that water flows freely from sink faucets, and make sure that shut-off valve to hot water back in range is open. (This valve is located under sink drain board.)

(2) In cars numbered K-500 to K-503, never start fire in range until water is visible in gauge glass on overhead tanks; the water backs will burst if cold water is turned into them when hot.

g. Before leaving the car:

(1) Extinguish fire and dump coals in ash box. Remove all ashes and coals. If no other place is available, put ashes and coals on road bed and extinguish with water.

(2) (*a*) In cars numbered K-100 to K-499, open five valves under water tanks and water heater, drain valve under sink and leave open. Close cut-off cock at governor and reducing valve, located on wall inside of car near bread locker.

(*b*) In cars K-500 to K-503, open six faucets marked A, B, and C and drain valve D (painted red) at sink, and drain valve E (painted red) under hot-water boilers. (See fig. 18.)

(3) Clean car thoroughly.

(4) Place stools in sink.

(5) Close all windows; secure side doors; draw shades; seal end doors with Government car seals, if available—otherwise use railroad car seals, and record number and initials of seal applied.

(6) Turn off all lights.

h. In case of failure of lights, water system or steam heat, notify train commander so he can wire ahead for railroad maintenance crew. Do not attempt to repair this apparatus yourself.

23. Equipment

In addition to permanently installed equipment, the following utensils are required for troop kitchen cars:

a. UNIT E:

3 Pot, stock, 15-gal., w/cover

3 Pot, stock, 10-gal., w/cover

b. UNIT F:

4 Pan, bake and roast, 4 $\frac{3}{4}$ " x 20 $\frac{1}{4}$ " x 26 $\frac{1}{4}$ "

4 Dipper, tin, 1-qt.

3 Fork, cook, flesh, 15"

3 Fork, cook, flesh, 21"

4 Knife, butcher, 10" blade

6 Knife, paring

3 Ladle, 15"

1 Ladle, 21"

3 Skimmer, length over-all 15"

4 Spoon, basting, length over-all 15"

2 Spoon, basting, length over-all 21"

2 Turner, cake, length over-all 15"

2 Turner, cake, length over-all 21"

1 Cleaver, butchers, 8" blade

1 Machine, chopping (grinding) meat and food, hand operated

1 Saw, butchers, 22" blade

1 Steel, butchers, length of blade 10"

1 Whip, egg, wire, 12" or 16"

3 Opener, can, hand

1 Pick, ice

c. UNIT G:

2 Can, corrugated, nesting, galvanized, w/cover 32-gal.

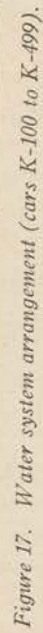


Figure 17. Water system arrangement (cars K-100 to K-499).

- 3 Bucket, general purpose, galvanized, heavy-weight, w/o lip, 14-qt. capacity

- 1 Pot, stock, 10-gal., w/cover

d. It is recommended that the following expendable items be supplied each car, but not included with nonexpendable items for return to the point of origin of the troop train movement:

Item	Less than 200 men	More than 200 men
Soap, ordinary issue, cakes	3 per day	5 per day
Lye, cans	2	3
Brushes, scrubbing	3	4
Rags, clean, lbs	10	10
Brooms, corn	1	1

24. Unit E*

a. Pack unit E in a nailed, wooden box, with style 2 braced ends, 52-inches long, 20½-inches wide, and 26-inches deep (inside dimensions), constructed according to figure 19. Lumber used for sides, top, bottom and ends will be not less than ¾-inch thick. Make all end cleats of 1½-inches by 3¼-inches lumber. All nails not clinched will be cement coated.

b. Across the full width of each end nail a wooden handle, of the same width and thickness as the end cleats. Place the handle approximately one-third of the depth of the box from the top (about 9-inches).

c. Nail four cleats, ¾-inch by 3-inches by 18½-inches, to inner face of lid. Place each of the two middle cleats so that the center is 19-inches from the nearer end of the cover. Center of each end cleat must be approximately 3½-inches from the nearer end of cover.

d. Nail two cleats, ¾-inch by 3-inches by 23-inches, to each side of box, with the lower end of each cleat on the bottom of the box; the center of each cleat must be 17¼-inches from nearer inside end of box. Cut a notch, 11-inches deep and ¾-inch wide, in each cleat. Fit two partitions, 20½-inches long, 11-inches deep, and ¾-inch thick, into the notched cleats.

e. Nail two cleats, 19-inches by 2-inches by 2-inches, across the bottom of the box, between each pair of notched cleats.

f. Cut four blocks, 10-inches by 3-inches by ¾-inch, and place one in each corner of the box, laid flat against the end, with the top of the block 4¾-inches below the inside top of the box.

g. Construct the lower frame, 51¾-inches long and 20¼-inches wide, using four pieces ¾-inch by 3½-inches, according to figure 21. Across each end

of the frame nail a cleat, 1¾-inches by ¾-inch, on edge. Nail a single cleat, 1¾-inches by ¾-inch, across the frame, 3¾-inches from the right end, on edge. Nail a second cleat, of the same dimensions, 14¼-inches from the right end, on edge. Nail one cleat, 1¾-inches by ½-inch, laid flat, across the frame, with the center of the cleat 21-inches from the right end of the frame. Nail a second cleat of the same dimensions, also laid flat, with the center of the cleat 31 inches from the right end of the frame.

h. Cleats across the lower frame are necessary because of variations in the height of the cook pots packed in the box. The frame described in g above and shown in the illustrations is merely an example; the arrangement of cleats must vary according to the height of the cook pots.

i. Construct the upper frame according to figure 21. This frame consists of two stringers, 51¾-inches by 1¾-inches by ¾-inch, and three sets of two cleats, nailed to the two stringers, each of the six cleats to be 20¼-inches by 1¾-inches by ½-inch. Space each pair of cleats far enough apart to contain the handle of a 10-gallon cook pot cover. Place each end pair of cleats so that the center of the space between them is 8⅝-inches from the nearer end of the frame. The center of the space between the two middle cleats will be 17¼-inches from the space between each of the two end pairs. Wherever a cleat is to be nailed to one of the two stringers, notch the stringer ½-inch to receive the cleat.

j. Fit the box with not less than four 8-inch heavy strap hinges, fastened to the back of the box with carriage bolts, and to the outer side of cover with No. 9 gauge wood screws of sufficient length to pass through the cover and at least three-fourths of the thickness of the cleats.

k. Secure the cover to sides and ends with No. 9 gauge screws, spaced approximately 3½-inches apart at ends and 6-inches apart at sides, and long enough for two-thirds of each screw to be imbedded in the member holding the point.

25. Unit F

a. Pack unit F in a nailed, wooden box, with style 2 braced ends, 46½-inches long, 22-inches wide, and 7½-inches deep (inside dimensions), constructed according to figure 23. Use lumber at least ¾-inch thick throughout; make end cover cleats ¾-inch by 2¼-inches. All nails not clinched will be cement coated.

b. Across the inner face of the top nail three cleats, each 2¾-inch by ¾-inch. The two end cleats will be 21½-inches long, with each end 1-inch from the nearer edge of the top. The center cleat will be

*Note. In paragraphs 24 and 25 measurements given for placement of cleats and dividers are figured from the center of the piece. "Right end" and "left end" see to the ends as seen from a position facing the open box.

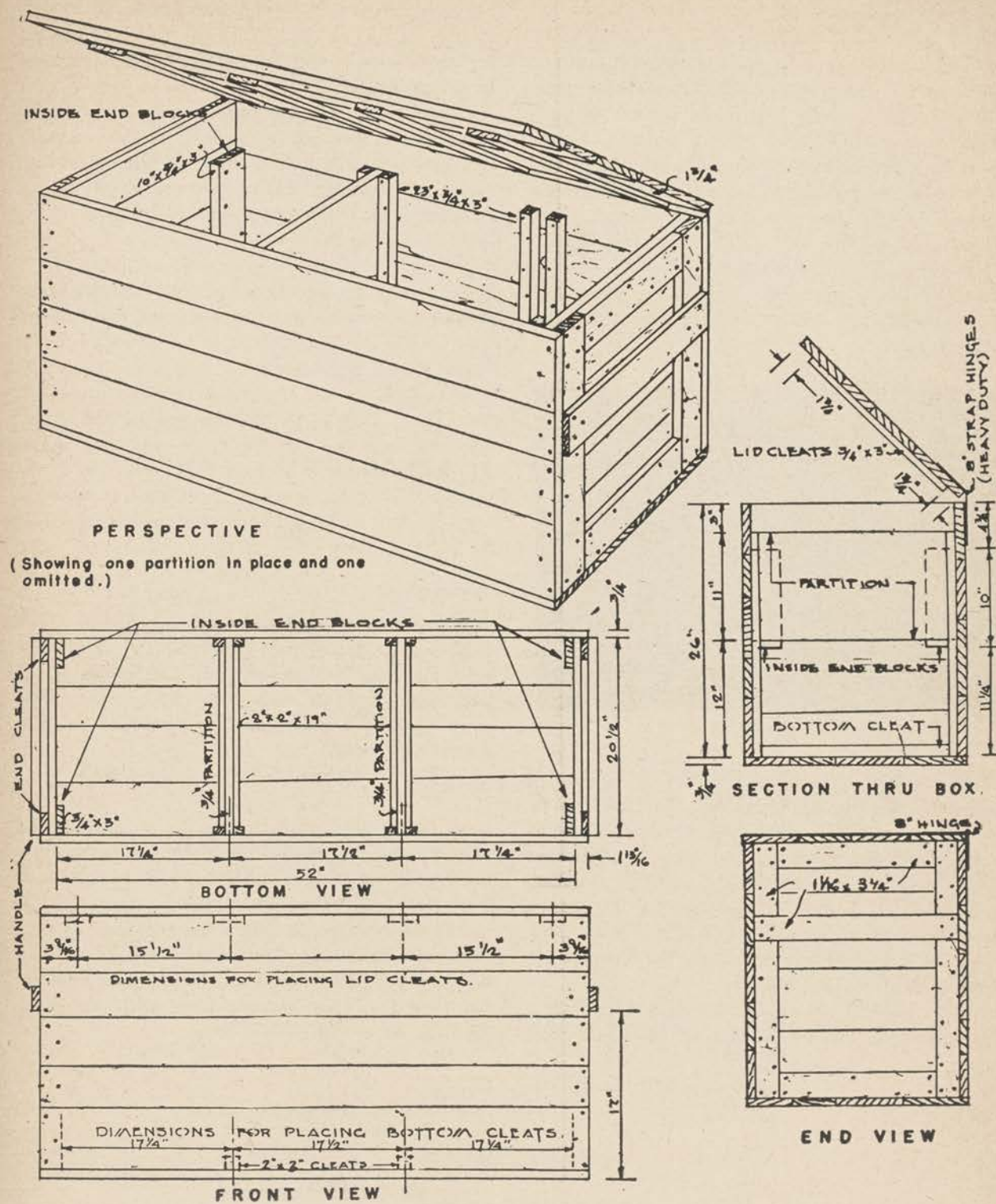


Figure 19. Construction of "E" box.

19½-inches long, with each end 2-inches from the nearer edge of the top.

c. Place a partition, 22-inches by 7½-inches by ¾-inch, 10⅝-inches from inside right end of box. Nail the partition to sides and bottom with not less than 7-penny cement-coated nails, spaced not more than 2½-inches apart. The nails should be long enough to pass through the side (or bottom) of box, and to be imbedded at least two-thirds of their length in the member holding the point. Nail a second partition of the same dimensions 7⅞-inches from the left end of the box. Nail supporting blocks, 7½-inches by 2¾-inches by ¾-inch, laid flat, to each side of the box adjacent to the partitions. Drive two nails through each end of each partition into the adjacent block.



Figure 20. Completed "E" box.

d. Place a split partition 22-inches by 7½-inches by ¾-inch, near the right end of the box, adjacent to the supporting blocks. Split and cut the partition to fit and hold the grinding and chopping machine snugly in place. Nail a supporting block 7½-inches by 2-inches by ¾-inch, on each side of the box to the right of the split partition. Place a block, 3½-inches by ¾-inch by 6-inches, inside the clamp of the grinding and chopping machine.

e. Nail a block, 1¾-inches by ½-inch by 6-inches, flat against the end of the box, in the front right

corner, with the end of the block on the bottom of the box. Nail a second block of the same dimensions 9¾-inches from the first (measured center to center) against the end of the box. Nail a piece of lumber 11½-inches by ½-inch by 6-inches to the blocks to form a pocket for holding the cleaver in place.

f. Fit the box with not less than four 8-inch heavy strap hinges, fastened to the back of the box with carriage bolts, and to the outer side of cover with No. 9 gauge wood screws of sufficient length to pass through the cover and at least three-fourths of the thickness of the cleats.

g. Secure the cover to sides and ends with No. 9 gauge screws, spaced approximately 3½-inches apart at ends and 6-inches apart at sides, and long enough for two-thirds of each screw to be imbedded in the member holding the point.

h. Some items of equipment included in unit F occasionally vary in size. The dimensions of the "F" box may therefore vary. While the figures given in this paragraph and in figure 23 will usually be correct, it may be necessary to increase or decrease them slightly to fit the equipment to be packed in the box.

26. Strapping

Reinforce each "E" and "F" type box with three flat, steel straps, ¾-inch by .020-inch. Apply one strap girthwise around sides, top and bottom of the box, 4-inches from each end. Apply the middle strap girthwise approximately equidistant between the two end straps.

27. Unit G

Nest the three buckets inside the stock pot, and place the cover on the pot. Securely fasten the cover to the pot with 15-gauge annealed wire, by extending wire from one handle up and over the top to the handle on the opposite side. Nest the two 32-gallon cans and wire as described in paragraph 12 a. Place the pot inside the top 32-gallon can, then wire the two 32-gallon cans in accordance with paragraph 12 b.

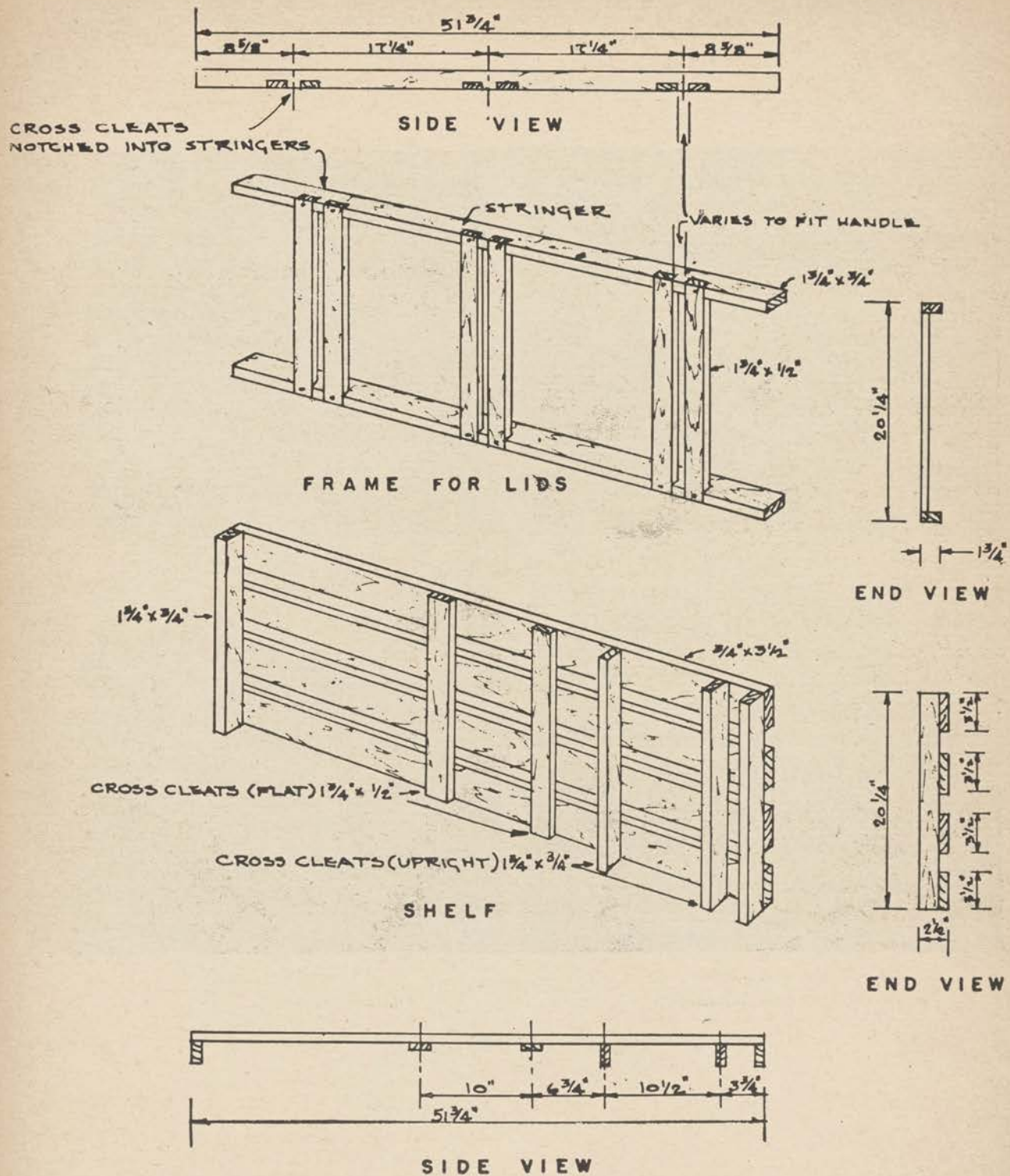


Figure 21. Frames for Unit E.



a. "E" box, with frames.

c. "E" box, both frames inside.

b. "E" box, lower frame inside.

d. Complete unit E.

Figure 22. Assembly of Unit E.

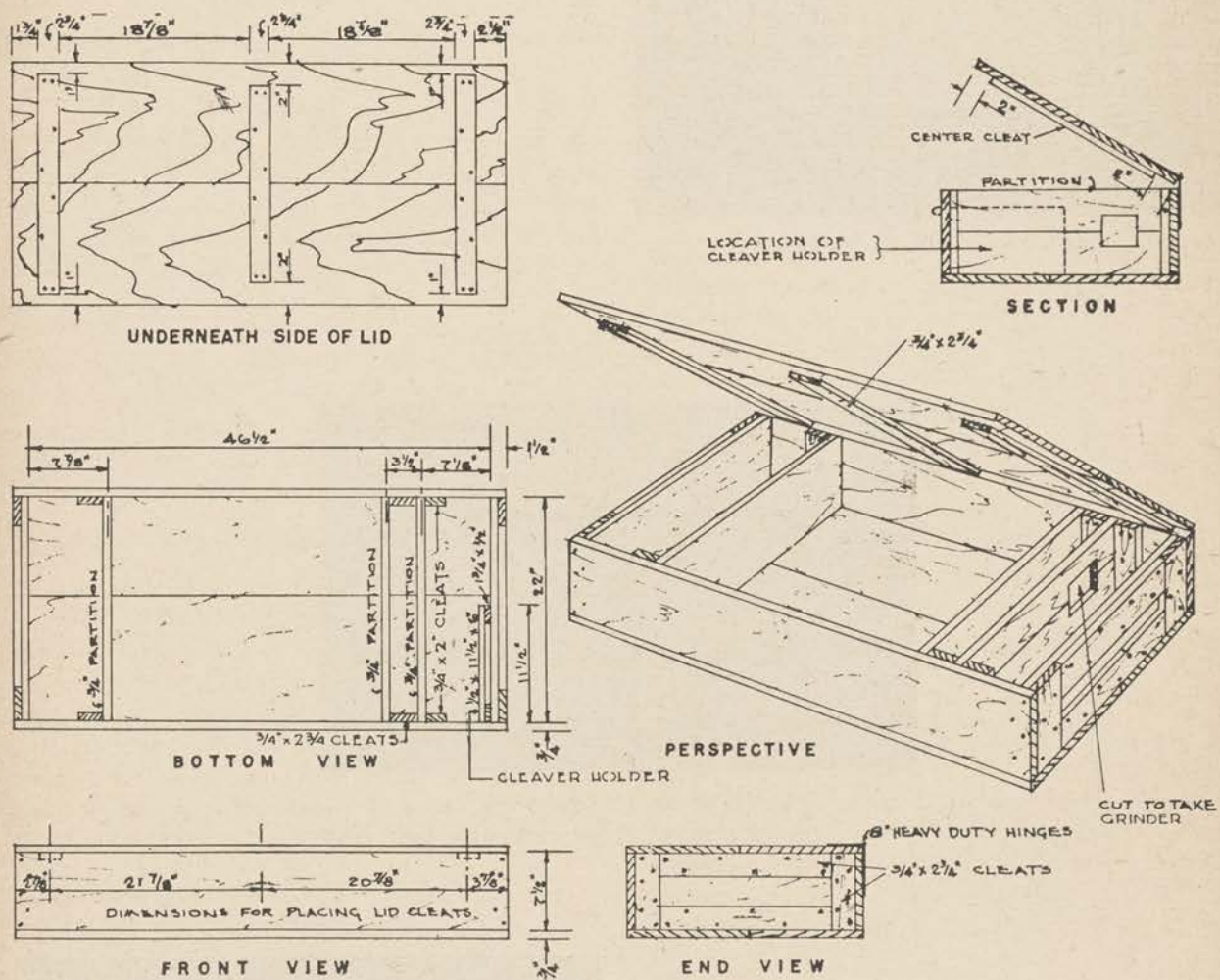


Figure 23. Construction of "F" box.

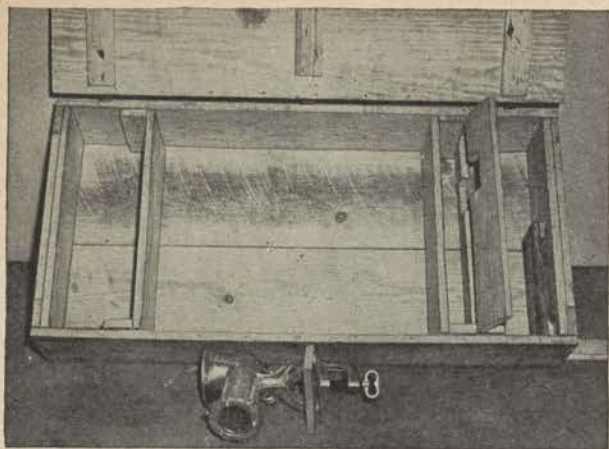


Figure 24. Completed "F" box.

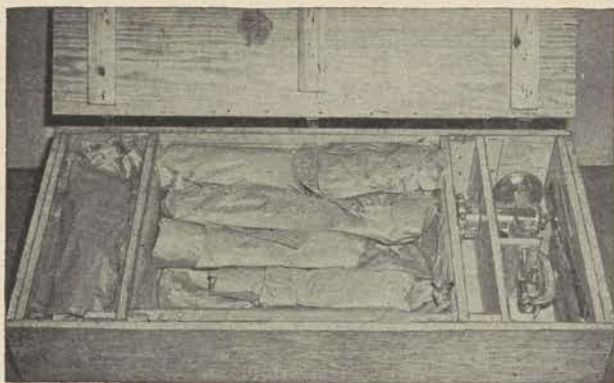


Figure 25. Unit F, packed.

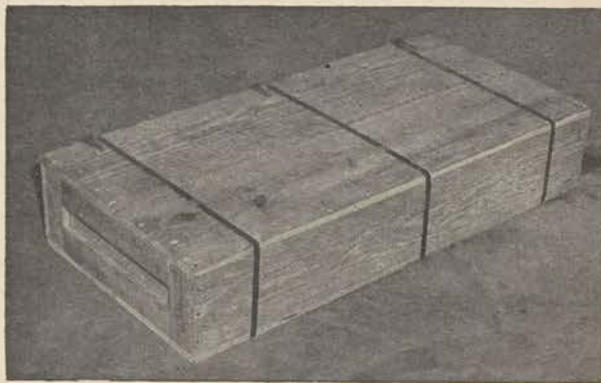


Figure 26. Complete Unit F.

TROOP TRAIN RATION

28. General

The following menus are prescribed for use by detachments of enlisted men directed to travel by train and to utilize the kitchen car facilities provided thereon. These menus are based on the premise that traveling troops are in sedentary employment.

29. Bread

Initial supply of bread at point of origin will not exceed that required for 6 meals. Additional bread required for troop train movements in excess of 2 days will be obtained from emergency supply points designated in War Department directives.

30. Subsistence for Unforeseen Delays

To provide subsistence for unforeseen delays en route, sales officers at points of origin will issue an additional one-third day's nonperishable troop train ration for each person for each day of the scheduled journey, provided the additional allowance does not exceed one full ration. Thus, for a 2 days' scheduled journey, the components of 2 menus will be issued, plus two meals of the menu for unforeseen delays. This same principle applies in other similar cases.

31. Recapitulation Issue Chart

This chart (fig. 27) has all items of the troop train

ration listed alphabetically down the left-hand side. The body of the chart is divided into 7 days or columns, with an extra column for emergency meals. The days are divided into three meals: breakfast, dinner and supper. Starting with breakfast of the second day, through supper of the seventh day, allowances are cumulative. Due to variations in the departure time of trains, the first column allowances are entered individually for each meal; thus, adding the first, second or third meal of menu No. 1 after departure to the cumulative allowance through the last meal of the trip will give the maximum total allowance of all items per 100 men. The total allowance, multiplied by strength of troop movement and pointed off two places, will give the total to be issued for all meals. The emergency meal column is the same as the first day column, individual meals. Since the emergency meals are for unforeseen delays en route, they should be figured separately.

Example: 576 officers and enlisted men are authorized rations for eleven meals, plus two emergency meals. Departure time is 1400, making supper of the first day the first meal. Counting off eleven meals from that point indicates that the eleventh meal will be breakfast of the fifth day. Therefore, the two emergency meals will be dinner and supper.

ALLOWANCES PER 100 MEN		CUMULATIVE																					Emergency Meals		
		1			2			3			4			5			6			7					
		B	D	S	B	D	S	B	D	S	B	D	S	B	D	S	B	D	S	B	D	S			
NONPERISHABLE																									
Asparagus,	#10 Can																								
Beans, String,	#10 Can																								
Beans, Dry, White	Lb.																								
Beets,	#10 Can																								
Catsup,	1 1/2 os. Bot																								
Carrots,	#10 Can																								
Cocoa	Lb.																								
Coffee	Lb.																								
Cookies	Lb.																								
Corn	Can																								
Crackers	Lb.																								
Dressing Salad,	Gal. Jar																								
Dessert Pwd, Choc	10# Can																								
Dessert Pwd, Strsch	10# Can																								
Fruit Canned,	#10 Can																								
Flour, Wheat	Lb.																								
Ham, Corned Beef,	5# Can																								
Ham, Mt & Veg	#10 Can																								
Jam,	#2 Jar																								
Luncheon Meat,	#2 Can																								
Marmalade	Lb.																								
Milk, Evap.	#1 Can																								
Mustard, Prep.	Gal. Jar																								
Noodles	Lb.																								
Peaches	Can																								
Pears,	#10 Can																								
Peas,	#10 Can																								
Pepper	1/2 os. Can																								
Pickler,	Gal. Jar																								
Pineapple, Sli.	#10 Can																								
Pork Sausage,	2# Can																								
Prunes, Evap.	Lb.																								
Salmon,	1# Can																								
Salt	Lb.																								
Spinach	#10 Can																								
Stew, Mt & Veg	10 os. Can																								
Sugar, Granulated	Lb.																								
Sugar, Brown	1# Pkg.																								
Tomatoes,	#10 Can																								
Vienne Sausage	2 1/2 os. Can																								
PERISHABLE																									
Apples, Eating	Ea.																								
Bacon	Lb.																								
Beef, Carcass	Lb.																								
Bread	Lb.																								
Butter	Lb.																								
Cabbage	Lb.																								
Carrots	Lb.																								
Cheese, A. C.	Lb.																								
Eggs	Doz.																								
Fresh Fruit	Ea.																								
Ham	Lb.																								
Lard	Lb.																								
Stranges	Ea.																								
Onions, Dry	Lb.																								
Pork Roasting	Lb.																								
(Ham Loin or Butte)																									
Potatoes, White	Lb.																								
SUBSTITUTIONS																									
Beets, Fresh	Lb.																								
Carrots, Fresh	Lb.																								
Beef, Boneless, Stew	Lb.																								
Beef, Boneless (steak	Lb.																								
or roast)																									
SUPPLIES FOR PAPER SERVICE																									
Plates, Paper, 9"	Ea.																								
Plates, Paper, 5"	Ea.																								
Cups, Paper, 8 os.	Ea.																								
Forks, Paper	Ea.																								
Spoons, Paper	Ea.																								
Pepper 1 1/2 os. Can per 750 Rations																									

Figure 27. Recapitulation issue chart.

32. Menu and Issue Chart for Unforeseen Delays EN ROUTE (Nonperishable)

Breakfast	Dinner	Supper
Canned fruit*	Meat and Vegetable hash	Luncheon meat
Pork sausages	Tomatoes	Green peas
Crackers	Crackers	Pickles
Jam or Marmalade	Jam or Marmalade	Crackers
Coffee	Canned fruit*	Jam or Marmalade
	Coffee	Canned fruit*
		Cocoa

*See list of canned fruits, paragraph 35.

Ingredients	Unit No.	Ingredients	Unit No.	Ingredients	Unit No.
Canned fruit	#10 can 3	Meat & veg. hash	#10 can 6	Luncheon meat	#6 can 6
Pork sausages	2 lb. can 20	Tomatoes	#10 can 3	Peas, green	#10 can 3
Crackers	lb. 10	Crackers	lb. 10	Pickles	gal. 1
Jam or Marmalade	2 lb. jar 4	Jam or Marmalade	2 lb. jar 4	Crackers	lb. 10
Coffee, R & G	lb. 4	Canned fruit	#10 can 3	Jam or Marmalade 2	lb. jar 4
Milk, evap.	#1 can 4	Coffee, R & G	lb. 4	Canned fruit	#10 can 3
Sugar, gran.	lb. 3	Milk, evap.	#1 can 4	Cocoa	lb. 3
		Sugar, gran.	lb. 3	Milk, evap.	#1 can 24
				Sugar, gran.	lb. 5

Supplies for paper service

Plates, paper, 9".....	ea. 110	Plates, paper, 9".....	ea. 110	Plates, paper, 9".....	ea. 110
Plates, dessert, paper, 5"	ea. 110	Plates, dessert, paper, 5"	ea. 110	Plates, dessert, paper, 5"	ea. 110
Cups, paper, 7 oz.....	ea. 110	Cups, paper, 7 oz.....	ea. 110	Cups, paper, 7 oz.....	ea. 110
Forks, paper.....	ea. 110	Forks, paper.....	ea. 110	Forks, paper.....	ea. 110
Spoons, paper.....	ea. 110	Spoons, paper.....	ea. 110	Spoons, paper.....	ea. 110

Ingredients—100 Men

Issue Chart for Nonperishable Menu

Nonperishable items	Unit	Breakfast	Dinner	Supper	Total
Canned fruit*.....	#10 can	3	3	3	9
Pork sausages.....	2 lb. can	20	..	..	20
Milk, evaporated.....	#1 (14½ oz.) can	4	10	18	32
Crackers.....	lb.	10	10	10	30
Jam or Marmalade.....	2 lb. jar	4	4	4	12
Coffee, R & G.....	lb.	4	4	..	8
Sugar, granulated.....	lb.	3	3	5	11
Meat & vegetable hash.....	#10 can	..	6	..	6
Tomatoes.....	#10 can	..	3	..	3
Luncheon meat.....	6 lb. can	..	..	6	6
Peas, green.....	#10 can	..	..	3	3
Pickles.....	gal.	..	..	1	1
Cocoa.....	lb.	..	..	3	3

*See list of canned fruits, paragraph 35.

Supplies for paper service				
Plates, paper, 9".....	ea. 110	110	110	330
Plates, dessert, paper, 5".....	ea. 110	110	110	330
Cups, paper, 7 oz.....	ea. 110	110	110	330
Forks, paper.....	ea. 110	110	110	330
Spoons, paper.....	ea. 110	110	110	330

33. Menus and Issue Charts for Normal Scheduled Journey

Menu No. 1

<i>Breakfast</i>		<i>Dinner</i>		<i>Supper</i>	
Oranges		Diced boiled beef		Roast pork	
Cheese omelet		Noodles		Gravy	
Bread		Carrots		Potatoes	
Butter		Bread		Stewed tomatoes	
Jam		Butter		Bread	
Coffee		Peaches		Butter	
		Coffee		Fresh fruit	
				Cocoa	

Ingredients	Unit No.	Ingredients	Unit No.	Ingredients	Unit No.
Oranges	ea. 100	Diced boiled beef,		Roast pork & gravy	
Cheese omelet		Beef, carcass	lb. 50	Pork, roasting	lb. 55
Eggs	doz. 13	Noodles	lb. 10	Flour, wheat	lb. 2
Cheese, A. C.	lb. 3	Carrots*	#2 can 15	Milk, evap.	#1 can 2
Milk, evap.	#1 can 3	Bread	lb. 20	Potatoes	lb. 40
Lard	lb. 2	Butter	lb. 2	Stewed tomatoes	
Bread	lb. 20	Peaches	#10 can 3	Tomatoes	#10 can 3
Butter	lb. 3	Coffee, R & G	lb. 4	Bread	lb. 2
Jam	2# jar 4	Milk, evap.	#1 can 4	Bread	lb. 20
Coffee, R & G	lb. 4	Sugar, gran.	lb. 3	Butter	lb. 2
Milk, evap.	#1 can 4			Fresh fruit**	ea. 100
Sugar, gran.	lb. 3			Cocoa	lb. 3
				Milk, evap.	#1 can 24
				Sugar, gran.	lb. 5

*If not available, substitute 3—#10 cans of canned carrots or 20 lbs. fresh carrots.

**See list of fresh fruits, paragraph 35.

Supplies for paper service					
Plates, paper, 9".....	ea. 110	Plates, paper, 9".....	ea. 110	Plates, paper, 9".....	ea. 110
Cups, paper, 7 oz.....	ea. 110	Plates, dessert, paper,		Cups, paper, 7 oz....	ea. 110
Forks, paper.....	ea. 110	5"	ea. 110	Forks, paper.....	ea. 110
Spoons, paper.....	ea. 110	Cups, paper, 7 oz....	ea. 110	Spoons, paper.....	ea. 110
		Forks, paper.....	ea. 110		
		Spoons, paper.....	ea. 110		

Ingredients—100 Men

Issue Chart for Menu No. 1

Perishable items	Unit	Breakfast	Dinner	Supper	Total
Oranges	ea.	100	...	...	100
Eggs	doz.	13	...	...	13
Cheese, A. C.	lb.	3	...	...	3
Lard	lb.	2	...	...	2
Butter	lb.	3	2	2	7
Beef, carcass.....	lb.	...	50	...	50
Pork, roasting (Ham, Loin, butts, etc.).....	lb.	...	...	55	55
Potatoes, white.....	lb.	...	...	40	40
Fresh fruit*.....	ea.	...	...	100	100
Bread	lb.	20	20	22	62

Nonperishable items

Milk, evap.	#1 (14½ oz.) can	7	4	26	37
Jam	2 lb. jar	4	..	..	4
Coffee, R & G.....	lb.	4	4	..	8
Sugar, gran.	lb.	3	3	5	11
Noodles	lb.	..	10	..	10
Carrots	#2 can**	..	15	..	15
Peaches	#10 can	..	3	..	3
Flour, wheat	lb.	..	..	2	2
Tomatoes	#10 can	..	..	3	3
Cocoa	lb.	..	..	3	3

*See list of fresh fruits, paragraph 35.

**If not available, substitute three #10 cans of canned carrots or 20 lbs. fresh carrots.

Supplies for paper service				
Plates, paper, 9".....	ea. 110	110	110	330
Plates, dessert, paper, 5".....	ea. ...	110	...	110
Cups, paper, 7 oz.....	ea. 110	110	110	330
Forks, paper	ea. 110	110	110	330
Spoons, paper	ea. 110	110	110	330

Menu No. 2

Breakfast

Apples
Bacon
Eggs
Bread
Butter
Jam
Coffee

Dinner

Beef stew
Beets
Pickles
Bread
Butter
Pineapple
Cocoa

Supper

Roast beef
Gravy
Potatoes
Green peas
Bread
Butter
Oranges
Coffee

Ingredients	Unit No.	Ingredients	Unit No.	Ingredients	Unit No.
Apples, eating	ea. 100	Beef stew		Roast beef & gravy	
Bacon	lb. 15	Beef, carcass	lb. 35	Beef, carcass	lb. 55
Eggs	doz. 17	Potatoes, white	lb. 20	Flour, wheat	lb. 2
Bread	lb. 20	Carrots, fresh	lb. 10	Potatoes, white	lb. 40
Butter	lb. 3	Onions, dry	lb. 5	Green peas	#10 can 3
Jam	#2 jar 4	Flour, wheat	lb. 2	Bread	lb. 20
Coffee, R & G	lb. 4	Beets	#10 can 3	Butter	lb. 2
Milk, evap.	#1 can 4	Pickles	gal. 1	Oranges	ea. 100
Sugar, gran.	lb. 3	Bread	lb. 20	Coffee, R & G	
		Butter	lb. 2	Milk, evap.	#1 can 4
		Pineapple	#10 can 3	Sugar, gran.	lb. 3
		Cocoa	lb. 3		
		Milk, evap.	#1 can 24		
		Sugar, gran.	lb. 5		

Supplies for paper service					
Plates, paper, 9".....	ea. 110	Plates, paper, 9".....	ea. 110	Plates, paper, 9".....	ea. 110
Cups, paper, 7 oz.....	ea. 110	Plates, dessert paper,		Cups, paper, 7 oz.....	ea. 110
Forks, paper	ea. 110	5"	ea. 110	Forks, paper	ea. 110
Spoons, paper	ea. 110	Cups, paper, 7 oz.....	ea. 110	Spoons, paper	ea. 110
		Forks, paper	ea. 110		
		Spoons, paper	ea. 110		

Ingredients—100 Men

Issue Chart for Menu No. 2

Perishable items	Unit	Breakfast	Dinner	Supper	Total
Apples, eating	ea.	100	..	...	100
Bacon	lb.	15	..	...	15
Eggs	doz.	17	..	...	17
Butter	lb.	3	2	2	7
Beef, carcass	lb.	...	35	55	90
Potatoes, white	lb.	...	20	40	60
Carrots, fresh*	lb.	...	10	...	10
Onions, dry	lb.	...	5	...	5
Oranges	ea.	...	..	100	100
Bread	lb.	20	20	20	60

Nonperishable items

Jam	2 lb. jar	4	..	..	4
Coffee, R & G.....	lb.	4	..	4	8
Milk, evaporated	#1 (14½ oz.) can	4	24	4	32
Sugar, gran.	lb.	3	5	3	11
Beets	#10 can	..	3	..	3
Pickles	gal.	..	1	..	1
Pineapple (sliced if available).	#10 can	..	3	..	3
Cocoa	lb.	..	3	..	3
Flour, wheat	lb.	..	2	2	4
Peas, green	#10 can	..	..	3	3

*If not available, substitute ten #2 cans of carrots (or two #10 cans).

Supplies for paper service				
Plates, paper, 9"	ea. 110	110	110	330
Plates, dessert, paper, 5".....	ea.	110	...	110
Cups, paper, 7 oz.....	ea. 110	110	110	330
Forks, paper	ea. 110	110	110	330
Spoons, paper	ea. 110	110	110	330

Menu No. 3

Breakfast

Oranges
Bacon
Eggs
Bread
Butter
Jam
Coffee

Dinner

Boiled ham
Mustard
Potatoes
Cole slaw
Bread
Butter
Chocolate pudding
Coffee

Supper

Baked beans w/bacon
Tomatoes
Bread
Butter
Canned fruit
Cocoa

Ingredients	Unit No.	Ingredients	Unit No.	Ingredients	Unit No.
Oranges	ea. 100	Boiled ham		Baked beans w/bacon	
Bacon	lb. 15	Ham, War	lb. 50	Beans, issue, dry	lb. 18
Eggs	doz. 17	Mustard, prepared	gal. $\frac{1}{4}$	Bacon	lb. 10
Bread	lb. 20	Potatoes	lb. 40	Tomatoes	#10 can 1
Butter	lb. 3	Cole slaw		Sugar, brown	lb. 2
Jam	2# jar 4	Cabbage	lb. 15	Onions, dry	lb. 1
Coffee, R & G	lb. 4	Mayonnaise	gal. $\frac{1}{4}$	Tomatoes	#10 can 3
Milk, evap.	#1 can 4	Bread	lb. 20	Bread	lb. 20
Sugar, gran.	lb. 3	Butter	lb. 2	Butter	lb. 2
		Chocolate pudding		Canned fruit*	#10 can 3
		Powder, dessert		Cocoa	lb. 3
		chocolate	10# can $\frac{1}{2}$	Milk, evap.	#1 can 24
		Milk, evap.	#1 can 6	Sugar, gran.	lb. 5
		Coffee, R & G	lb. 4		
		Milk, evap.	#1 can 4		
		Sugar, gran.	lb. 3		

*See list of canned fruits, paragraph 35.

Supplies for paper service

Plates, paper, 9".....	ea. 110	Plates, paper, 9".....	ea. 110	Plates, paper, 9".....	ea. 110
Cups, paper, 7 oz.....	ea. 110	Plates, dessert, paper,		Cups, paper, 7 oz.....	ea. 110
Forks, paper	ea. 110	5"	ea. 110	Forks, paper	ea. 110
Spoons, paper	ea. 110	Cups, paper, 7 oz.....	ea. 110	Spoons, paper	ea. 110
		Forks, paper	ea. 110		
		Spoons, paper	ea. 110		

Ingredients—100 Men

Issue Chart for Menu No. 3

Perishable items	Unit	Breakfast	Dinner	Supper	Total
Oranges	ea.	100	..	..	100
Bacon	lb.	15	..	10	25
Eggs	doz.	17	..	..	17
Butter	lb.	3	2	2	7
Ham, War	lb.	..	50	..	50
Potatoes, white	lb.	..	40	..	40
Cabbage	lb.	..	15	..	15
Onions, dry	lb.	..	..	1	1
Bread	lb.	20	20	20	60

Nonperishable items

Jam	2 lb. jar	4	....	..	4
Coffee, R & G.....	lb.	4	4	..	8
Milk, evap.	#1 (14½ oz.) can	4	10	24	38
Sugar, gran.	lb.	3	3	5	11
Mayonnaise	gal.	..	¼	..	¼
Powder, dessert, chocolate.....	10 lb. can	..	½	..	½
Beans, issue, dry	lb.	..	....	18	18
Tomatoes	#10 can	..	....	4	4
Sugar, brown	lb.	..	....	2	2
Canned fruit*	#10 can	..	....	3	3
Cocoa	lb.	..	....	3	3
Mustard, prepared	gal.	..	¼	..	¼

*See list of canned fruits, paragraph 35.

Supplies for paper service

Plates, paper, 9".....	ea. 110	110	110	330
Plates, dessert, paper, 5".....	ea. ...	110	...	110
Cups, paper, 7 oz.....	ea. 110	110	110	330
Forks, paper	ea. 110	110	110	330
Spoons, paper	ea. 110	110	110	330

Menu No. 4

Breakfast

Stewed prunes
Pork sausages
Scrambled eggs
Bread
Butter
Jam
Coffee

Dinner

Baked fish
Boiled potatoes
Corn
Bread
Butter
Jam
Apples
Cocoa

Supper

Corned beef hash
Catsup
String beans
Bread
Butter
Cookies
Coffee

Ingredients	Unit No.	Ingredients	Unit No.	Ingredients	Unit No.
Stewed prunes		Baked fish		Corned beef hash	5½# can 7
Prunes, evap.	lb. 7	Salmon	1# can 25	Catsup	14 oz. bot. 8
Sugar, gran.	lb. ½	Tomatoes	#10 can 2	String beans	#10 can 3
Pork sausages	2# can 15	Boiled potatoes		Bread	lb. 20
Scrambled eggs		Potatoes, white	lb. 40	Butter	lb. 2
Eggs	doz. 13	Corn	#2 can 15	Cookies	lb. 14
Milk, evap.	#1 can 3	Bread	lb. 20	Coffee, R & G	lb. 4
Bread	lb. 20	Butter	lb. 2	Milk, evap.	#1 can 4
Butter	lb. 3	Jam	2# jar 4	Sugar, gran.	lb. 3
Jam	2# jar 4	Apples, eating	ea. 100		
Coffee, R & G	lb. 4	Cocoa	lb. 3		
Milk, evap.	#1 can 4	Milk, evap.	#1 can 24		
Sugar, gran.	lb. 3	Sugar, gran.	lb. 5		

Supplies for paper service

Plates, paper, 9".....	ea. 110	Plates, paper, 9".....	ea. 110	Plates, paper, 9".....	ea. 110
Plates, dessert, paper, 5"	ea. 110	Cups, paper, 7 oz.....	ea. 110	Cups, paper, 7 oz.....	ea. 110
Cups, paper, 7 oz.....	ea. 110	Forks, paper	ea. 110	Forks, paper	ea. 110
Forks, paper	ea. 110	Spoons, paper	ea. 110	Spoons, paper	ea. 110
Spoons, paper	ea. 110				

Ingredients—100 Men

Issue Chart for Menu 4

Perishable items	Unit	Breakfast	Dinner	Supper	Total
Eggs	doz.	13	...	..	13
Butter	lb.	3	2	2	7
Potatoes, white	lb.	..	40	..	40
Apples, eating	ea.	..	100	..	100
Bread	lb.	20	20	20	60

Nonperishable items

Prunes, evap.	lb.	7	...	..	7
Sugar, gran.	lb.	3½	5	3	11½
Pork sausages	2 lb. can	15	..	..	15
Milk, evap.	#1 (14½ oz.) can	7	24	4	35
Jam	2 lb. jar	4	4	..	8
Coffee, R & G.	lb.	4	..	4	8
Salmon	1 lb. can	....	25	..	25
Tomatoes	#10 can	....	2	..	2
Corn	#2 can	....	15	..	15
Cocoa	lb.	....	3	..	3
Corned beef hash.	5½ lb. can	....	..	7	7
Catsup	14 oz. bot.	....	..	8	8
Beans, string	#10 can	....	..	3	3
Cookies	lb.	....	..	14	14

Supplies for paper service

Plates, paper, 9"	ea. 110	110	110	330
Plates, dessert, paper, 5"	ea. 110	...	...	110
Cups, paper, 7 oz.	ea. 110	110	110	330
Forks, paper	ea. 110	110	110	330
Spoons, paper	ea. 110	110	110	330

Menu No. 5

Breakfast

Oranges
Bacon
Eggs
Bread
Butter
Jam
Coffee

Dinner

Fried luncheon meat
Potatoes
Carrots
Pickles
Bread
Butter
Fresh fruit
Coffee

Supper

Meat & vegetable stew
Asparagus
Bread
Butter
Pineapple
Cocoa

Ingredients	Unit No.	Ingredients	Unit No.	Ingredients	Unit No.
Oranges	ea. 100	Fried luncheon meat		Meat & vegetable stew	30 oz. can 25
Bacon	lb. 15	Luncheon meat	6# can 6	Asparagus	#10 can 3
Eggs	doz. 17	Flour, wheat	lb. 2	Bread	lb. 20
Bread	lb. 20	Eggs	doz. 1	Butter	lb. 2
Butter	lb. 3	Milk, evap.	#1 can 3	Pineapple	#10 can 3
Jam	2# jar 4	Potatoes, white	lb. 40	Cocoa	lb. 3
Coffee, R & G	lb. 4	Carrots	#10 can 3	Milk, evap.	#1 can 24
Milk, evap.	#1 can 4	Pickles	gal. 1	Sugar, gran.	lb. 5
Sugar, gran.	lb. 3	Bread	lb. 20		
		Butter	lb. 2		
		Fresh fruits*	ea. 100		
		Coffee, R & G	lb. 4		
		Milk, evap.	#1 can 4		
		Sugar, gran.	lb. 3		

*See list of canned fruits, paragraph 35.

Supplies for paper service

Plates, paper, 9".....	ea. 110	Plates, paper, 9".....	ea. 110	Plates, paper, 9".....	ea. 110
Cups, paper, 7 oz.....	ea. 110	Cups, paper, 7 oz.....	ea. 110	Plates, dessert, paper,	
Forks, paper	ea. 110	Forks, paper	ea. 110	5"	ea. 110
Spoons, paper	ea. 110	Spoons, paper	ea. 110	Cups, paper, 7 oz.....	ea. 110
				Forks, paper	ea. 110
				Spoons, paper	ea. 110

Ingredients—100 Men

Issue Chart for Menu No. 5

Perishable items	Unit	Breakfast	Dinner	Supper	Total
Oranges	ea.	100	...	..	100
Bacon	lb.	15	...	..	15
Eggs	doz.	17	1	..	18
Butter	lb.	3	2	2	7
Potatoes, white	lb.	...	40	..	40
Fresh fruit*	ea.	...	100	..	100
Bread	lb.	20	20	20	60

Nonperishable items

Jam	2 lb. jar	4	..	..	4
Coffee, R & G	lb.	4	4	..	8
Milk, evap.	#1 (14½ oz.) can	4	7	24	35
Sugar, gran.	lb.	3	3	5	11
Luncheon meat	6 lb can	..	6	..	6
Flour, wheat	lb.	..	2	..	2
Carrots	#10 can	..	3	..	3
Pickles	gal.	..	1	..	1
Meat & vegetable stew	30 oz. can	..	..	25	25
Asparagus	#10 can	..	..	3	3
Pineapple (sliced if available)	#10 can	..	..	3	3
Cocoa	lb.	..	..	3	3

*See list of canned fruits, paragraph 35.

Supplies for paper service

Plates, paper, 9"	ea. 110	110	110	330
Plates, dessert, paper, 5"	ea. ...	...	110	110
Cups, paper, 7 oz.	ea. 110	110	110	330
Forks, paper	ea. 110	110	110	330
Spoons, paper	ea. 110	110	110	330

Menu No. 6

Breakfast

Apples
Bacon
Eggs
Bread
Butter
Jam
Coffee

Dinner

Baked ham
Gravy
Potatoes
Corn
Bread
Butter
Cookies
Cocoa

Supper

Macaroni & Cheese
w/Tomatoes
Green Peas
Bread
Butter
Jam
Pears
Coffee

Ingredients	Unit No.	Ingredients	Unit No.	Ingredients	Unit No.
Apples, eating	ea. 100	Baked ham & gravy		Macaroni & cheese	
Bacon	lb. 15	Ham, War	lb. 50	with tomatoes	lb. 10
Eggs	doz. 17	Flour, wheat	lb. 2	Macaroni	lb. 5
Bread	lb. 20	Potatoes, white	lb. 40	Cheese, A.C.	#1 can 3
Butter	lb. 3	Corn	#2 can 15	Milk, evap.	#10 can 2
Jam	2 lb. jar 4	Bread	lb. 20	Tomatoes	#10 can 3
Coffee, R & G	lb. 4	Butter	lb. 2	Green peas	lb. 20
Milk, evap.	#1 can 4	Cookies	lb. 14	Bread	lb. 2
Sugar, gran.	lb. 3	Cocoa	lb. 3	Butter	#2 jar 4
		Milk, evap.	#1 can 24	Jam	#10 can 3
		Sugar, gran.	lb. 5	Pears	lb. 4
				Coffee, R & G	#1 can 4
				Milk, evap.	lb. 3
				Sugar, gran.	

Supplies for paper service

Plates, paper, 9"....	ea. 110	Plates, paper, 9"....	ea. 110	Plates, paper, 9"....	ea. 110
Cups, paper, 7 oz....	ea. 110	Cups, paper, 7 oz....	ea. 110	Plates, dessert	
Forks, paper	ea. 110	Forks, paper	ea. 110	paper, 5"	ea. 110
Spoons, paper	ea. 110	Spoons, paper	ea. 110	Cups, paper, 7 oz....	ea. 110
				Forks, paper	ea. 110
				Spoons, paper	ea. 110

Ingredients—100 Men

Issue Chart for Menu No. 6

Perishable items	Unit	Breakfast	Dinner	Supper	Total
Apples, eating	ea.	100	..	..	100
Bacon	lb.	15	..	..	15
Eggs	doz.	17	..	..	17
Butter	lb.	3	2	2	7
Ham, War	lb.	..	50	..	50
Potatoes, white	lb.	..	40	..	40
Cheese, A. C.	lb.	..	..	5	5
Bread	lb.	20	20	20	60

Nonperishable items

Jam	2 lb. jar	4	..	4	8
Coffee, R & G.....	lb.	4	..	4	8
Milk, evap.	#1 (14½ oz.) can	4	24	7	35
Sugar, gran.	lb.	3	5	3	11
Flour, wheat	lb.	..	2	..	2
Corn	#2 can	..	15	..	15
Cookies	lb.	..	14	..	14
Cocoa	lb.	..	3	..	3
Macaroni, dry	lb.	..	..	10	10
Tomatoes	#10 can	..	..	2	2
Peas, green	#10 can	..	..	3	3
Pears	#10 can	..	..	3	3

Supplies for paper service

Plates, paper, 9"	ea. 110	110	110	330
Plates, dessert, paper, 5".....	ea. ..	..	110	110
Cups, paper, 7 oz.....	ea. 110	110	110	330
Forks, paper	ea. 110	110	110	330
Spoons, paper	ea. 110	110	110	330

Menu No. 7

Breakfast

Oranges
Cheese omelet
Bread
Butter
Jam
Coffee

Dinner

Boiled beans w/bacon
Spinach
Pickles
Bread
Butter
Butterscotch pudding
Coffee

Supper

Vienna sausages
Mustard & catsup
Creamed potatoes
String beans
Bread
Butter
Peaches
Cocoa

Ingredients	Unit No.	Ingredients	Unit No.	Ingredients	Unit No.
Oranges	ea. 100	Boiled beans		Vienna sausages	24 oz. can 15
Cheese omelet		w/bacon		Mustard	gal. $\frac{1}{4}$
Eggs	doz. 13	Beans, issued, dry	lb. 18	Catsup	14 oz. bot. 5
Cheese, A. C.	lb. 3	Bacon	lb. 10	Creamed potatoes	
Milk, evap.	#1 can 3	Spinach	#10 can 3	Potatoes, white	lb. 30
Lard	lb. 2	Pickles	gal. 1	Milk, evap.	#1 can 6
Bread	lb. 20	Bread	lb. 20	Flour, wheat	lb. 1
Butter	lb. 3	Butter	lb. 2	String beans	#10 can 3
Jam	2 lb. jar 4	Butterscotch		Bread	lb. 20
Coffee, R & G	lb. 4	pudding		Butter	lb. 2
Milk, evap.	#1 can 4	Powder, dessert		Peaches	#10 can 3
Sugar, gran.	lb. 3	butterscotch	#10 can $\frac{1}{2}$	Cocoa	lb. 3
		Milk, evap.	#1 can 6	Milk, evap.	#1 can 24
		Coffee, R & G	lb. 4	Sugar, gran.	lb. 5
		Milk, evap.	#1 can 4		
		Sugar, gran.	lb. 3		

Supplies for paper service

Plates, paper, 9".....	ea. 110	Plates, paper, 9".....	ea. 110	Plates, paper, 9".....	ea. 110
Cups, paper, 7 oz....	ea. 110	Plates, dessert		Plates, dessert,	
Forks, paper	ea. 110	paper, 5"	ea. 110	paper, 5"	ea. 110
Spoons, paper	ea. 110	Cups, paper, 7 oz....	ea. 110	Cups, paper, 7 oz....	ea. 110
		Forks, paper	ea. 110	Forks, paper	ea. 110
		Spoons, paper	ea. 110	Spoons, paper	ea. 110

Ingredients—100 Men

Issue Chart for Menu No. 7

Perishable Items	Unit	Breakfast	Dinner	Supper	Total
Eggs	doz.	13	..	..	13
Cheese, A. C.	lb.	3	..	..	3
Lard	lb.	2	..	..	2
Butter	lb.	3	2	2	7
Bacon	lb.	..	10	..	10
Potatoes, white	lb.	..	..	30	30
Oranges	ea.	100	..	..	100
Bread	lb.	20	20	20	60

Nonperishable Items

Sugar, gran.	lb.	3	3	5	11
Milk, evap.	#1 (14½ oz.) can	7	10	30	47
Jam	2 lb. jar	4	..	..	4
Coffee, R & G.	lb.	4	4	..	8
Beans, issue, dry.	lb.	..	18	..	18
Spinach	#10 can	..	3	..	3
Pickles	gal.	..	1	..	1
Powder, dessert, butterscotch	10 lb. can	..	½	..	½
Vienna sausages	24 oz. can	..	..	15	15
Mustard, prepared	gal.	..	..	¼	¼
Catsup	14 oz. bot.	..	..	5	5
Flour, wheat	lb.	..	..	1	1
Beans, string	#10 can	..	..	3	3
Peaches	#10 can	..	..	3	3
Cocoa	lb.	..	..	3	3

Supplies for paper service

Plates, paper, 9"	ea. 110	110	110	330
Plates, dessert, paper, 5"	ea. ..	110	110	220
Cups, paper, 7 oz.	ea. 110	110	110	330
Forks, paper	ea. 110	110	110	330
Spoons, paper	ea. 110	110	110	330

34. Salt and Pepper Issues

The following cumulative amounts of salt and pepper are listed to cover running totals for 7 days for 100 men.

	Unit	1 day	2 days	3 days	4 days	5 days	6 days	7 days
Salt	lb.	3	6	8	10	12	14	16
Pepper	oz.	4	4	4	4	4	4	4

35. Fruit Substitution Chart and Quantities for 100 Men

Fresh Fruits

Canned fruits

Dried fruits

No.	Unit	Fruit	No.	Unit	Fruit	No.	Unit	Fruit
<i>Citrus Fruits</i>			<i>Citrus Fruits & Juices</i>					
50	each	Grapefruit	3	#10 can	Grapefruit sections			—
		—	4	#10 can	Grapefruit juice			—
100	each	Oranges			—			—
100	each	Tangerines			—			—
<i>Other Fruits</i>			<i>Other Fruits & Juices</i>					
100	each	Apples, eating	—		—			—
100	each	Apricots	3	#10 can	Apricots	7	lb.	Apricots
100	each	Bananas			—			—
		—	3	#10 can	Cherries, sweet			—
		—	3	#10 can	Figs	7	lb.	Figs
		—	3	#10 can	Fruit cocktail			—
30	lb.	Grapes			—			—
100	each	Peaches	3	#10 can	Peaches	7	lb.	Peaches
100	each	Pears	3	#10 can	Pears	7	lb.	Pears
		—	3	#10 can	Pineapple, sliced or broken slices			—
		—	4	#10 can	Pineapple juice			—
100	each	Plums	3	#10 can	Plums	7	lb.	Prunes
		—	4	#10 can	Tomato juice			—

36. Recipes

The following recipes are based on the quantities of food prescribed for 100 soldiers. The recipes call for the amounts of food as listed in the issue charts.

a. BAKED BEANS AND BACON. Yield: 100 Portions

Ingredients	Weights	Measures
Beans, issue, dry.....	18 pounds	
Water, cold	4 to 5 gallons	(16 to 20 No. 56 dippers)
Salt	5 ounces	(10 M.K. spoons)
Tomatoes	1 No. 10 can	
Onions, dry, quartered.	1 pound	(1 No. 56 dipper)
Sugar, brown	2 pounds	(2 M.K. cups)
Bacon	10 pounds	

(1) Wash beans thoroughly. Cover with cold water; soak 6 to 8 hours.

(2) Add salt; cover utensil. Heat to boiling point; reduce heat and simmer 1½ hours or until tender but not split or mushy. Drain and reserve liquid.

(3) Combine beans, tomatoes, onions and sugar; mix well.

(4) Arrange alternate layers of bean mixture and bacon in baking pans.

(5) Bake in slow oven (300° F.) 3 to 4 hours, adding remaining liquid as needed.

b. BAKED SALMON. Yield: 100 Portions

Ingredients	Weights	Measures
Salmon	25—1 pound cans	
Tomatoes	2 No. 10 cans	
Salt	1 ounce	(2 M.K. spoons)
Pepper	½ ounce	(½ M.K. spoon)

(1) Place unflaked salmon and oil from cans in large ration pans.

(2) Mix tomatoes, salt, and pepper together.

(3) Pour tomato mixture over salmon.

(4) Bake in moderate oven (350° F.) about 30 minutes or until fish is heated through.

c. BEEF STEW.

Yield: 100 Portions

Ingredients	Weights	Measures
Beef, carcass	35 pounds	
Salt	4 ounces	(8 M.K. spoons)
Water, boiling (to cover)		
Onions, dry, cubed.....	5 pounds	(8½ No. 56 dippers)
Carrots, fresh, cubed...	10 pounds	
Potatoes, white, cubed..	20 pounds	
Flour, wheat, sifted.....	2 pounds	(2 No. 56 dippers)
Salt (to taste).....		
Pepper (to taste).....		

(1) Cut beef into 1- to 2-inch cubes.

(2) Cover meat with boiling salted water. Cover utensil. Simmer 2½ to 3 hours or until tender.

(3) Add vegetables in the following order allowing required time for each to cook: onions 45 minutes to 1 hour; carrots and potatoes 30 minutes. Remove from heat.

(4) Drain stock from meat. Mix flour and a small amount of water together; stir until smooth. Add to hot stock.

(5) Heat stock to boiling point; boil 2 minutes, stirring constantly. Add salt and pepper.

(6) Pour gravy over meat and vegetables; reheat to serving temperature.

d. CHEESE OMELET.

Yield: 100 Portions

Ingredients	Weights	Measures
Eggs	13 dozen	
Milk, evaporated	3-14½ ounce cans	
Water (for milk).....	1½ quarts	(1½ No. 56 dippers)
Cheese, American, chopped	3 pounds	(3 No. 56 dippers)
Salt	5 ounces	(10 M.K. spoons)
Pepper	½ ounce	(1 M.K. spoon)
Lard, melted (for frying)	2 pounds	(1 No. 56 dipper)

(1) Beat eggs just enough to mix yolks and whites.

(2) Add milk, water, cheese, salt and pepper; beat thoroughly.

(3) Pour egg mixture 2 to 2½ inches deep into melted fat in baking pans.

(4) Cook over low heat, stirring occasionally, until eggs are thickened.

Note. Omelet may be baked in the oven. Stir several times during cooking.

e. FRIED LUNCHEON MEAT. Yield: 100 Portions

Ingredients	Weights	Measures
Eggs, beaten	1 dozen	(½ No. 56 dipper)
Milk, evaporated	3-14½ ounce cans	
Meat, luncheon, sliced..	6-6 pound cans	
Flour, wheat, sifted.....	2 pounds	(2 No. 56 dippers)
Bacon drippings		

(1) Mix beaten eggs and milk together.

(2) Dip slices of meat in flour, then in egg and milk mixture.

(3) Fry in bacon drippings until thoroughly heated and brown on both sides.

f. MACARONI WITH CHEESE AND TOMATOES.

Yield: 100 Portions

Ingredients	Weights	Measures
Macaroni	10 pounds	
Salt	4 ounces	(8 M.K. spoons)
Water, boiling	10 gallons	(40 No. 56 dippers)
Milk, evaporated	3-14½ ounce cans	
Tomatoes	2 No. 10 cans	
Cheese, American, chopped	5 pounds	(5 No. 56 dippers)
Salt (to taste).....		
Pepper (to taste)....		

(1) Break macaroni into 2- to 3-inch pieces.

(2) Add macaroni slowly to boiling salted water; boil 10 to 15 minutes or until tender. Drain well and add milk.

(3) Heat tomatoes; add cheese and stir until cheese is melted.

(4) Combine macaroni, tomato mixture, salt and pepper; mix well.

(5) Bake in moderate oven (350° F.) 25 minutes.

g. BOILED NOODLES.

Yield: 100 Portions

Ingredients	Weights	Measures
Noodles	10 pounds	
Salt*		
Beef stock, boiling ...	10 gallons	(40 No. 56 dippers)

* The amount of salt needed will depend upon the saltiness of the beef stock.

Add noodles slowly to boiling salted beef stock; boil 10 to 15 minutes or until tender. Drain well.

h. STEWED TOMATOES.

Yield: 100 Portions

Ingredients	Weights	Measures
Tomatoes	3 No. 10 cans	
Bread, dry, cubed....	2 pounds	
Salt	2 ounces	(4 M.K. spoons)
Pepper		

(1) Combine tomatoes, bread cubes, salt and pepper. Mix well.

(2) Heat to boiling point; reduce heat and simmer about 10 minutes.

i. BUTTERSCOTCH PUDDING. Yield: 100 Portions

Ingredients	Weights	Measures
Powder, dessert, butterscotch	5 pounds	
Water, cool	7¼ quarts	(7¼ No. 56 dippers)
Milk, evaporated	6-14½ ounce cans	

(1) Place dessert powder in a large kettle. Add 1 No. 56 dipper water and stir until a smooth paste is formed.

(2) Add remaining water to cornstarch mixture. Cook until thick; stir constantly.

(3) Remove from heat; add milk and mix well.

(4) Cool before serving.

j. CHOCOLATE PUDDING.

Yield: 100 Portions

Ingredients	Weights	Measures
Powder, dessert, chocolate	5 pounds	
Water, cool	7¼ quarts	(7¼ No. 56 dippers)
Milk, evaporated	6-14½ ounce cans	

(1) Place dessert powder in a large kettle. Add 1 No. 56 dipper water and stir until a smooth paste is formed.

(2) Add remaining water to cornstarch mixture. Cook until thick; stir constantly.

(3) Remove from heat; add milk and mix well.

(4) Cool before serving.

k. COCOA.

Yield: 100 Portions

Ingredients	Weights	Measures
Milk, evaporated	24-14½ ounce cans	
Water (for milk)	4 gallons	(16 No. 56 dippers)
Cocoa	3 pounds	(3¾ No. 56 dippers)
Sugar, granulated	5 pounds	(2½ No. 56 dippers)
Salt	¼ ounce	(½ M.K. spoon)
Water, cold	1 gallon	(4 No. 56 dippers)

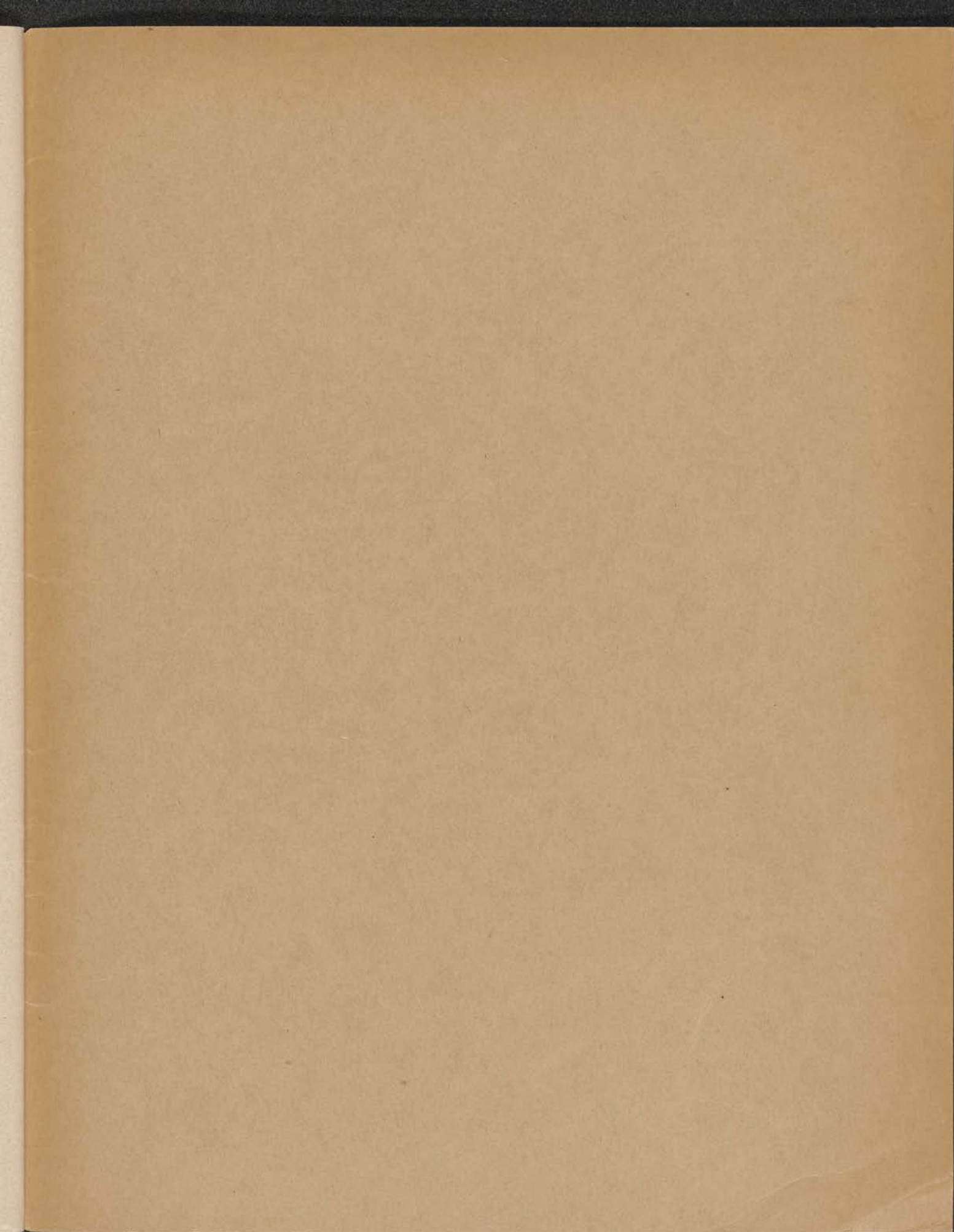
(1) Mix milk and water; heat to scalding point.

(2) Mix cocoa, sugar and salt. Add the 1 gallon cold water to form a smooth paste.

(3) Cook cocoa mixture over low heat until it boils, stirring constantly. Boil slowly 5 minutes.

(4) Combine milk and cocoa mixtures.

(5) Serve immediately while hot.



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